



February 23, 2018

Docket No. 52-048

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

SUBJECT: NuScale Power, LLC Response to NRC Request for Additional Information No. 137 (eRAI No. 8973) on the NuScale Design Certification Application

REFERENCES: 1. U.S. Nuclear Regulatory Commission, "Request for Additional Information No. 137 (eRAI No. 8973)," dated August 05, 2017
2. NuScale Power, LLC Response to NRC "Request for Additional Information No. 137 (eRAI No.8973)," dated October 03, 2018
3. NuScale Power, LLC Supplemental Response to NRC "Request for Additional Information No. 137 (eRAI No.8973)," dated January 04, 2018

The purpose of this letter is to provide the NuScale Power, LLC (NuScale) response to the referenced NRC Request for Additional Information (RAI).

The Enclosures to this letter contain NuScale's response to the following RAI Questions from NRC eRAI No. 8973:

- 03.08.04-15
- 03.08.04-16
- 03.08.04-17

The response to RAI Questions 03.08.04-18 and 03.08.04-19 were previously provided in Reference 2.

NuScale requests that the security-related information in Enclosure 1 be withheld from public disclosure in accordance with the requirements of 10 CFR § 2.390. Enclosure 2 contains a public version of the NuScale response.

This letter and the enclosed responses make no new regulatory commitments and no revisions to any existing regulatory commitments.

If you have any questions on this response, please contact Marty Bryan at 541-452-7172 or at mbryan@nuscalepower.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'Zackary W. Rad', written over a horizontal line.

Zackary W. Rad
Director, Regulatory Affairs
NuScale Power, LLC



RAIO-0218-58804

Distribution: Samuel Lee, NRC, OWFN-8G9A
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Enclosure 1: NuScale Response to NRC Request for Additional Information eRAI No. 8973,
nonpublic

Enclosure 2: NuScale Response to NRC Request for Additional Information eRAI No. 8973,
public

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Enclosure 1:

NuScale Response to NRC Request for Additional Information eRAI No. 8973, nonpublic
Security-Related Information - Withhold Under 10 CFR §2.390



Enclosure 2:

NuScale Response to NRC Request for Additional Information eRAI No. 8973, public

Response to Request for Additional Information Docket No. 52-048

eRAI No.: 8973

Date of RAI Issue: 08/05/2017

NRC Question No.: 03.08.04-15

10 CFR 50, Appendix A, GDC 1, 2, and 4 provides requirements to be met by SSC important to safety. In accordance with these requirements, DSRS Section 3.8.4 provides review guidance pertaining to the design of seismic Category I structures, other than the containment. Consistent with DSRS Section 3.8.4, the staff reviews the descriptive information, including plans and sections of each structure, to establish that there is sufficient information to define the primary structural aspects and elements relied upon for the structure to perform the intended safety function.

Staff review finds that the descriptive information, including plans and sections provided in the FSAR for the RXB and CRB need additional details to assist the staff's evaluation of these structures. Further, the enhancements to the FSAR descriptive information requested below are important for the verification that the as-built RXB and CRB conform to the approved design as per ITAAC in FSAR, Tier 1, Chapter 3.

Therefore, for the plan and section views provided in FSAR, Tier 2, Chapter 1, the staff requests the applicant to enhance the level of details provided in those plan and section views to include overall structure dimensions, and local dimensions such as slab and wall thickness, complete identification of major elevations (e.g. for the RXB, roof elevation, elevation at the intersection of the exterior wall and the roof, and reactor building crane support elevation), and identification of section cuts in the plan views (e.g. identification of the section cuts for the section views shown in FSAR Figure 1.2-19). Also, provide drawings that show how the stiffener walls are supporting the sloping portion of the roof (rigid or hinge or sliding connections between them) and how the stiffener walls are connected with other structural members to transfer loads to the basemat.

Additionally, the staff request the applicant to provide a table identifying wall and floor thicknesses for the CRB in FSAR, Tier 1, Chapter 3. Further, the staff request enhancements to the section views and reinforcement drawings provided in FSAR, Tier 2, Appendix 3B to include missing section cut IDs (e.g. see Figures 3B-8, 3B-11, 3B-15, 3B-19, amongst other); provide missing section cuts that are currently identified in plan or section views [e.g. weir wall reinforcement layout (8 – 1697 – S51; see Figure 3B-11)]; correct inconsistent section cut IDs between the section cut identified in a section view and the respective detail drawing (e.g. section cut in Figure 3B-19 and reinforcement layout in Figure 3B-21; also between 3B-23 and

3B-24; and others); provide development length and concrete clear cover distances in the current reinforcement drawings in FSAR, Tier 2, Appendix 3B. Further, clarify whether the drawing in Figure 3B-47 applies to the section cut identified in Figure 3B-46. If not, provide the applicable drawing.

NuScale Response:

Plan and section views provided in FSAR Tier 2, Chapter 1 have been revised to include overall structure dimensions, local dimensions such as slab and wall thickness, complete identification of major elevations, identification of section cuts in the plan views for the reactor building (RXB; Figures 1.2-10 through 1.2-20), control building (CRB; Figures 1.2-21 through 1.2-27) and radioactive waste building (RWB; Figures 1.2-28 and 1.2-33).

NuScale's response to RAI 8973 Question 03.08.04-16 provides drawings that show how the stiffener walls are supporting the sloping portion of the roof and how the stiffener walls are connected with other structural members to transfer loads to the basemat.

As mentioned above, wall and floor thickness dimensions for the CRB are provided on figures in FSAR Tier 2, Chapter 1. As described in NuScale's response to RAI 9002, the completion of the as-built reconciliation does not require building dimensions or building drawings to be included in the Tier 1 design description of the building; therefore, critical dimensions were added to Tier 2, Table 3B-55 and not in Tier 1, Chapter 3.

Further, section views provided in FSAR Tier 2, Appendix 3B are revised to include and correct section cut IDs. For instance, Figure 3B-47 applies to the section cut identified in Figure 3B-46. The figures showing reinforcement drawings are also revised to provide the development length and concrete clear cover distances. The revised figures include 3B-8, 3B-9, 3B-11 through 3B-13, 3B-15 through 3B-17, 3B-19 through 3B-21, 3B-23, 3B-24, 3B-26, 3B-27, 3B-29, 3B-30, 3B-38, 3B-39, 3B-43, 3B-44, 3B-46, 3B-47, 3B-51, and 3B-52. Detailed design information regarding wall reinforcement is removed from Appendix 3B.2.2, 3B.3.3, 3B.3.4, 3B.3.5, and Tables 3B-2, 3B-3, 3B-7, 3B-8, 3B-10, 3B-11, 3B-13 through 3B-15, 3B-17 through 3B-23, 3B-25, 3B-28, 3B-29, 3B-31, 3B-32, 3B-42, 3B-46, 3B-48, and 3B-49.

Impact on DCA:

FSAR Tier 2, Appendix 3B.2.2, 3B.3.3, 3B.3.4, 3B.3.5 and FSAR Tier 2, Tables 3B-2, 3B-3, 3B-7, 3B-8, 3B-10, 3B-11, 3B-13 through 3B-15, 3B-17 through 3B-23, 3B-25, 3B-28, 3B-29, 3B-31, 3B-32, 3B-42, 3B-46, 3B-48, and 3B-49, and FSAR Tier 2, Figures 1.2-10 through 1.2-33, and Figures 3B-8, 3B-9, 3B-11 through 3B-13, 3B-15 through 3B-17, 3B-19 through 3B-21, 3B-23, 3B-24, 3B-26, 3B-27, 3B-29, 3B-30, 3B-38, 3B-39, 3B-43, 3B-44, 3B-46, 3B-47, 3B-51, and 3B-52 have been revised as described in the response above and as shown in the markup provided in this response.

Response to Request for Additional Information Docket No. 52-048

eRAI No.: 8973

Date of RAI Issue: 08/05/2017

NRC Question No.: 03.08.04-16

10 CFR 50, Appendix A, GDC 1, 2, and 4 provides requirements to be met by SSC important to safety. In accordance with these requirements, DSRS Section 3.8.4 provides review guidance pertaining to the design of seismic Category I structures, other than the containment. Consistent with DSRS Section 3.8.4, the staff reviews the descriptive information, including plans and sections of each structure, to establish that there is sufficient information to define the primary structural aspects and elements relied upon for the structure to perform the intended safety function.

Figures 1.2-18, 3.8.4-5, 3B-11, 3B-13, 3B-15 (same as 3B-43), 3B-17, 3B-19, 3B-20, show stiffener walls (as described in Appendix 3B) immediately below the sloping portion of the roof and coinciding with the pilaster locations in the east-west direction. Describe the load path from the stiffener walls to the basemat of the reactor building. Augment the details of reinforcement layout figures provided in Appendix B to clearly show the connection between the structural members upon which these stiffener walls are supported and their connection to the roof (e.g. section views also showing the roof reinforcement).

Describe how the horizontal components of the inclined seismic forces from the sloping roof plates, are resisted.

NuScale Response:

The stiffener walls are located at grid lines RX2, RX3, RX4, RX5 and RX6 between grid lines RXA to RXA.7 and RXD.3 to RXE. The bottom of the stiffener walls is located at elevation 143'-0" and the top elevation ends at the sloped portion of RXB roof slab. Figure 1 shows the location of typical stiffener wall.

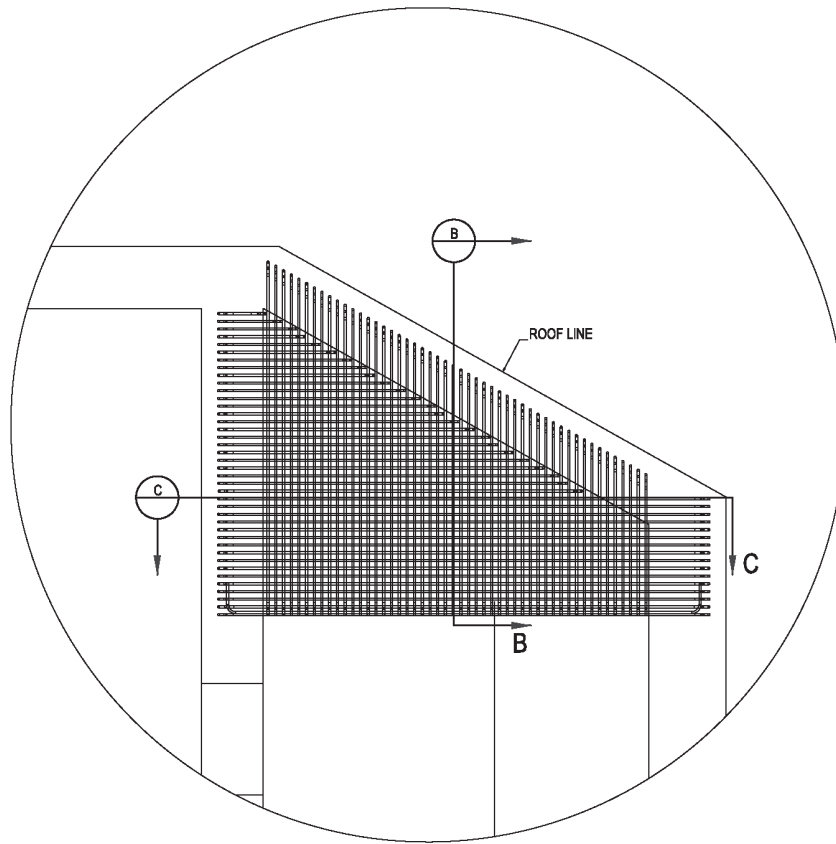


Figure 1: Stiffener Wall and Adjacent Structures

As shown in Figure 1, the stiffener walls connect the two parallel walls in the East-West direction on both sides of the RXB building with the sloped portion of the roof.

The steel reinforcement of the stiffener walls are anchored into the two parallel walls at both sides of the RXB Building and the roof. The anchorage of the reinforcement is through the use of a combination of U bars and 90 degree hooks.

Figure 2 and Figure 3 show how the horizontal and vertical stiffener wall reinforcement are anchored into the two adjacent walls and the roof slab, respectively.

The horizontal components of the inclined seismic forces from the sloping roof plates are resisted by out-of-plane shear and bending of the walls. The stiffener walls connect the two walls to act together and transfer the forces to the East-West direction walls. The forces in the walls are transferred to the basemat through the slabs and shear walls along grid lines RX1 and RX7.

Additional drawing details can be made available during an NRC audit.

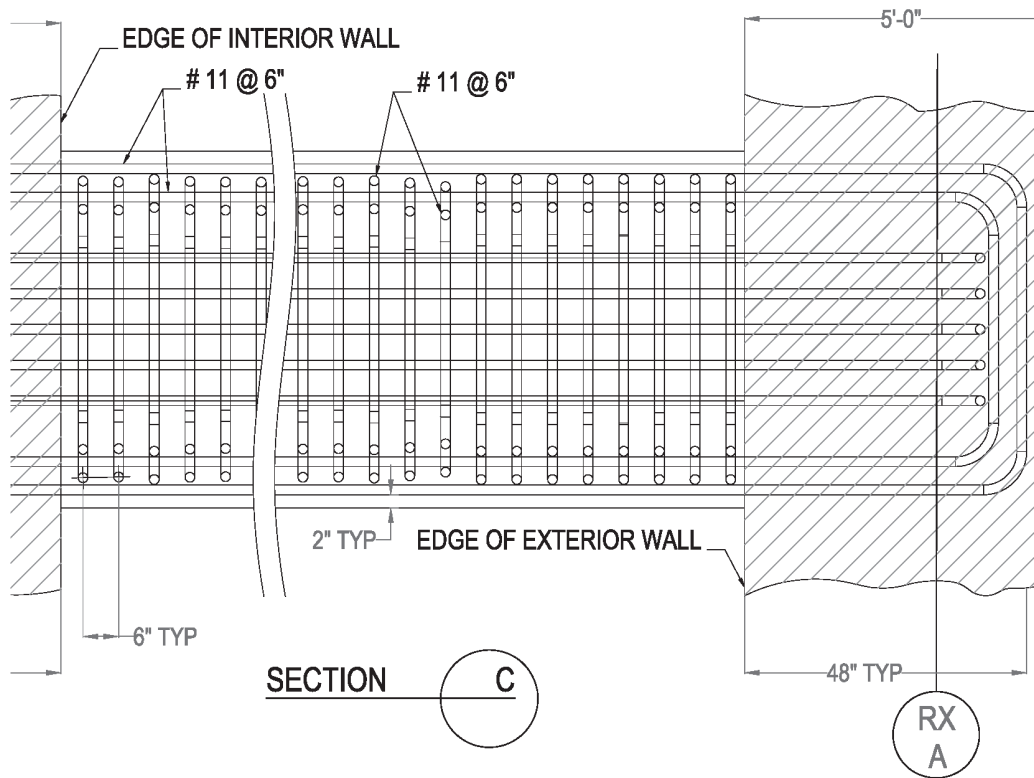


Figure 2: Stiffener Wall Horizontal Reinforcement Anchorage into Adjacent Walls

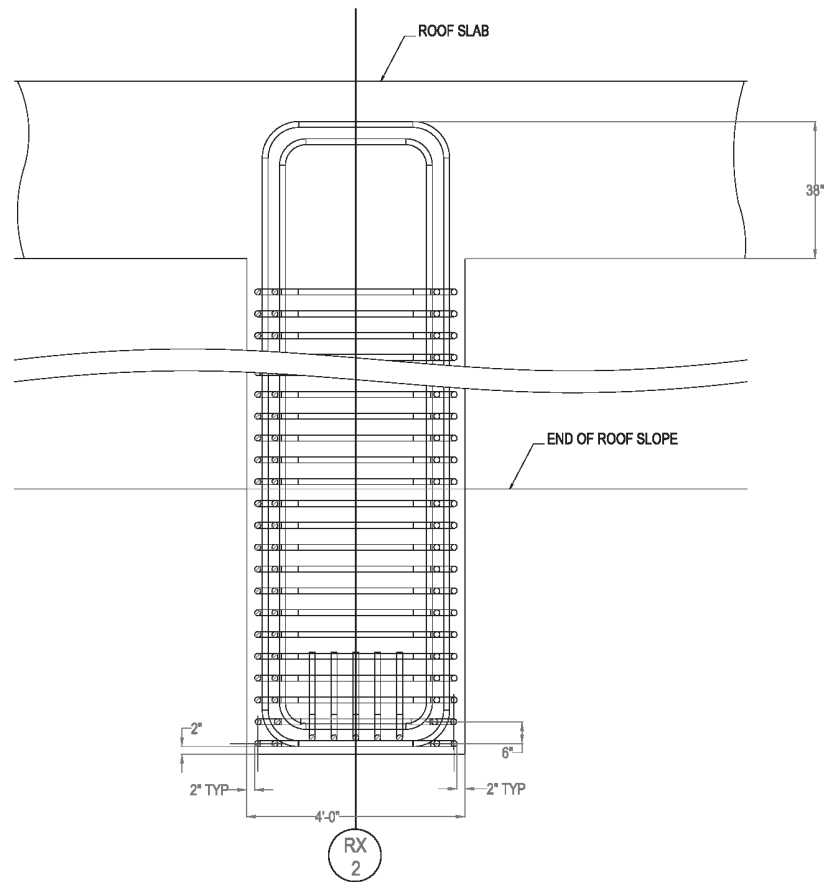


Figure 3: Stiffener Wall Vertical Reinforcement Anchorage into Roof Slab

Impact on DCA:

There are no impacts to the DCA as a result of this response.

Response to Request for Additional Information Docket No. 52-048

eRAI No.: 8973

Date of RAI Issue: 08/05/2017

NRC Question No.: 03.08.04-17

10 CFR 50, Appendix A, GDC 1, 2, and 4 provides requirements to be met by SSC important to safety. In accordance with these requirements, DSRS Section 3.8.4 provides review guidance pertaining to the design of seismic Category I structures, other than the containment. Consistent with DSRS Section 3.8.4, the staff reviews the descriptive information, including plans and sections of each structure, to establish that there is sufficient information to define the primary structural aspects and elements relied upon for the structure to perform the intended safety function.

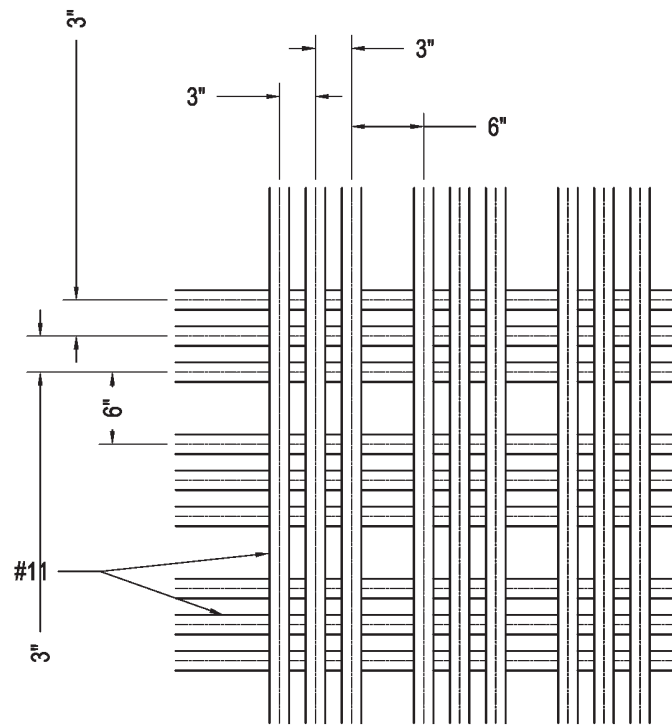
Figure 3B-30 shows a reinforcement section view (North-South view) for the RXB roof slab. Augment the details provided in this figure to explicitly identify the rebar for the sloping portion of the roof and the rebar for the supporting walls shown in this section view, rebar development length, and concrete clear cover information. Provide an east-west section view with reinforcement details for the roof.

NuScale Response:

The following response provides details of the rebar for the sloping portion of the reactor building roof and supporting walls.

FSAR Tier 2, Figure 3B-30 is revised to show the east-west section view for the rebar arrangement in the roof slab for the sloped and flat portions. The section shows how the steel reinforcement of the walls and the roof are arranged and anchored.

The roof reinforcement consists of two layers of rebar spaced at 3"-3"-6"-3"-3"-6" pattern in both directions at the top and the bottom of roof slab as shown in Figure 1.



PLAN B-B
SCALE: 1.0" = 1'-0"

Figure 1: Reactor Building Top and Bottom Roof Rebar Arrangement (not to scale)

The wall reinforcement near the roof along RX-A and RX-E consist of two layers of #11@6" rebar on both faces in the horizontal and vertical directions. The wall reinforcement are anchored in the roof by extending the outside wall rebar into the slab and anchoring the inside wall reinforcement into the wall/roof joint using hook anchorage extended into the slab/wall joint and fully developed per ACI 349-06 requirements .

The bottom reinforcements of the sloped portion of the roof are anchored into the outside wall along RX-A and RX-E by 90 degree and 180 degree hooks extended into the wall and fully developed per ACI 349-06 requirements. On the other side, the bottom reinforcement is anchored into the wall along RX-A.7 and RX-D.3 and the flat portion of the roof as shown in Figure 3B-30.

For the flat portion of the roof, the bottom reinforcement are anchored into the walls along RX-A.7 and RX-D.3 by using 90 degree hooks extended into the walls and fully developed per ACI 349-06 requirements..

The rebar clear cover for the walls and roof, shown in Figure 3B-30, is 3 inches.

Impact on DCA:



FSAR Tier 2, Figure 3B-30 has been revised as described in the response above and as shown in the markup provided in this response.

RAI 03.08.04-15

Figure 1.2-10: Reactor Building 24’-0” Elevation

{{ Withheld - See Part 9 }}

RAI 03.08.04-15

Figure 1.2-11: Reactor Building 35'-8" Elevation

{{ Withheld - See Part 9 }}

RAI 03.08.04-15

Figure 1.2-12: Reactor Building 50'-0" Elevation

[\[1\]](#) Withheld - See Part 9 [\[2\]](#)

RAI 03.08.04-15

Figure 1.2-13: Reactor Building 62'-0" Elevation

{{ Withheld - See Part 9 }}

RAI 03.08.04-15

Figure 1.2-14: Reactor Building 75'-0" Elevation

{{ Withheld - See Part 9 }}

RAI 03.08.04-15

Figure 1.2-15: Reactor Building 86'-0" Elevation

{{ Withheld - See Part 9 }}

RAI 03.08.04-15, RAI 19.05 Aircraft Impact Assessment (APR1400)-1

Figure 1.2-16: Reactor Building 100'-0" Elevation

Withheld - See Part 9

RAI 03.08.04-15, RAI 19.05 Aircraft Impact Assessment (APR1400)-1

Figure 1.2-17: Reactor Building 126'-0" Elevation

[{{](#) Withheld - See Part 9 [}}](#)

RAI 03.08.04-15, RAI 19.05 Aircraft Impact Assessment (APR1400)-1

Figure 1.2-18: Reactor Building 145'-6" Elevation

[[Withheld - See Part 9]]

RAI 03.08.04-15

Figure 1.2-19: Reactor Building East and West Section View

[[Withheld - See Part 9]]

RAI 03.08.04-15

Figure 1.2-20: Reactor Building South Section View

[{{](#) Withheld - See Part 9 [}}](#)

Figure 1.2-21: Control Building 50'-0" Elevation

{{ Withheld - See Part 9 }}

Figure 1.2-22: Control Building 63'-3" Elevation

{{ Withheld - See Part 9 }}

RAI 03.08.04-15, RAI 19.05 Aircraft Impact Assessment (APR1400)-1

Figure 1.2-23: Control Building 76'-6" Elevation

Withheld - See Part 9

Figure 1.2-24: Control Building 100'-0" Elevation

Withheld - See Part 9

Figure 1.2-25: Control Building 120'-0" Elevation

[[Withheld - See Part 9]]

Figure 1.2-26: Control Building North Section View

Withheld - See Part 9

RAI 03.08.04-15

Figure 1.2-27: Control Building West Section View

{{ Withheld - See Part 9 }}

RAI 03.08.04-15

Figure 1.2-28: Radioactive Waste Building 71'-0" Elevation

{{ Withheld - See Part 9 }}

RAI 03.08.04-15

Figure 1.2-29: Radioactive Waste Building 82'-0" Elevation

Withheld - See Part 9

RAI 03.08.04-15

Figure 1.2-30: Radioactive Waste Building 100'-0" Elevation

[{{](#) Withheld - See Part 9 [}}](#)

RAI 03.08.04-15

Figure 1.2-31: Radioactive Waste Building 120'-0" Elevation

{{ Withheld - See Part 9 }}

RAI 03.08.04-15

Figure 1.2-32: Radioactive Waste Building North and South Section Views

{{ Withheld - See Part 9 }}

RAI 03.08.04-15

Figure 1.2-33: Radioactive Waste Building West Section View

{{ Withheld - See Part 9 }}

3B.2.2.1 Wall at Grid Line 1

The wall at grid line 1 is an exterior structural wall on the west side of the RXB. This wall is 5 feet thick. The SAP2000 analysis model elevation view is shown in Figure 3B-7, along with the shell element labels.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

This wall uses 5000 psi concrete below grade and 7000 psi concrete above grade. ~~The uniform horizontal and vertical reinforcement of the wall, including the shear reinforcement, are listed below:-~~

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

- ~~5' exterior wall below EL. 75'-0" and above EL. 145'-6"~~ ~~6 layers EWEF (#11 @ 12" c/c) 2-leg stirrup (#6 @ 12" c/c)~~
- ~~5' exterior wall from EL. 75'-0" to 145'-6"~~ ~~8 layers EWEF (#11 @ 12" c/c) 2-leg stirrup (#6 @ 12" c/c)~~

~~The term EWEF stands for "each way each face" and c/c indicates "center to center".~~ Reinforcement drawings and section details are presented in Figure 3B-8 and Figure 3B-9.

A summary table of the element-based design check results for the wall at grid line 1 is presented in Table 3B-2. This summary table shows the maximum D/C ratios within each design check zone. All design check zones have no D/C exceedances. Based on the above results and evaluations, the wall is acceptable.

3B.2.2.2 Wall at Grid Line 3

The wall at grid line 3 consists of a 5 foot thick weir wall for the pool and a 4 foot thick upper stiffener located near the roof level. The SAP2000 analysis model elevation view is shown in Figure 3B-10, along with the shell element labels.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

~~The uniform horizontal and vertical reinforcement of the wall, including the shear reinforcement, is listed below:~~

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

- ~~5' interior wall~~ ~~3 layers of 3 bundled (#11 @ 12" c/c) 2 headed bars (#8 @ 24" c/c)~~
- ~~4' interior wall~~ ~~4 layers EWEF (#11 @ 12" c/c) 2-leg stirrup (#6 @ 12" c/c)~~
- ~~Type 3 pilaster~~ ~~3 layers of 8 bundled (#11 bars) #6 tie wrap @ 12" c/c~~

Reinforcement drawings and section details are presented in Figure 3B-11 through Figure 3B-13.

A summary table of the element-based design check results for the wall at grid line 3 is presented in Table 3B-3. This summary table shows the maximum D/C ratios within each design check zone and highlights those design check zones that exceed a D/C ratio of 0.8. Table 3B-4, Table 3B-5, and Table 3B-6 show the element averaging for the horizontal reinforcement, the horizontal membrane compression stress, and the vertical reinforcement, respectively. Table 3B-7 provides a summary of D/C ratios after averaging the affected elements. The method of averaging of the demand membrane forces, in-plane shear and out-of-plane moments (used for determination of D/C ratios in terms of reinforcing steel), and out-of-plane shears (used for determination of D/C ratios for shear) over a length of nominally 4 times the thickness of the wall is described in Section 3B.1.1.1. As shown in Table 3B-7, with this further distribution of demand, all D/C ratios are acceptable.

3B.2.2.3

Wall at Grid Line 4

The wall at grid line 4 is an interior wall of the RXB with two different thicknesses. The SAP2000 analysis model elevation view is shown in Figure 3B-14, along with the shell element labels.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

~~The uniform horizontal and vertical reinforcement of the wall including the shear reinforcement is listed below:~~

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

- ~~5' interior wall~~
 - ~~4' interior wall~~
- ~~3 layers of 3 bundled (#11 @ 12" c/c)
2 headed bars (#8 @ 24" c/c)~~

~~6 layers EWEF (#11 @ 12" c/c)
2-leg stirrup (#6 @ 12" c/c)~~

Reinforcement drawings and section details are presented in Figure 3B-15 through Figure 3B-17.

A summary table of the element-based design check results for the wall at grid line 4 is presented in Table 3B-8. This summary table shows the maximum D/C ratios within each design check zone and highlights those design check zones that exceed a D/C ratio of 0.8. Table 3B-9 shows the element averaging for the horizontal reinforcement exceedance indicated in Table 3B-8. Table 3B-10 provides a summary of D/C ratios after averaging. As shown in Table 3B-10, with this further distribution of demand, all D/C ratios are acceptable.

3B.2.2.4

Wall at Grid Line 6

The walls at grid line 6 consist of several wall thicknesses. The upper stiffener wall located near the roof is 4 feet thick. The pool wall section has two section

thicknesses, 7.5 feet and 5 feet. The SAP2000 analysis model elevation view is shown in Figure 3B-18, along with the shell element labels.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

The uniform horizontal and vertical reinforcement of the wall including the shear reinforcement is listed below:

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

- ~~7.5' pool wall~~

8 layers EWEF (#11 @ 12" c/c)

2-leg stirrup (#6 @ 12" c/c)
 - ~~5' pool wall~~

8 layers EWEF (#11 @ 12" c/c)

2-leg stirrup (#6 @ 12" c/c)
 - ~~5' pool wall~~

6 layers EWEF (#11 @ 12" c/c)

2-leg stirrup (#6 @ 12" c/c)
 - ~~4' interior wall~~

6 layers EWEF (#11 @ 12" c/c)

2-leg stirrup (#6 @ 12" c/c)

Reinforcement drawings and section details are presented in Figure 3B-19 through Figure 3B-21.

A summary table of the element-based design check results for the wall at grid line 6 is presented in Table 3B-11. This summary table shows the maximum D/C ratios within each design check zone. The highlighted entries indicate those D/C ratios that exceed 1.0. Table 3B-12 shows the element averaging for the horizontal reinforcement exceedance in Table 3B-11. Table 3B-13 provides a summary of D/C ratios after averaging. As shown in Table 3B-13, with this further distribution of demand, all D/C ratios are acceptable.

3B.2.2.5

Wall at Grid Line E

The wall at grid line E is an exterior structural wall on the south side of the RXB that is 5 feet thick. The SAP2000 analysis model elevation view is shown in Figure 3B-22, along with the shell element labels.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

The uniform horizontal and vertical reinforcement of the wall including the shear reinforcement is listed below:

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

- ~~5' exterior wall~~

8 layers EWEF (#11 @ 12" c/c)

3-leg stirrup (#6 @ 12" c/c)
 - ~~5' exterior wall~~

5 layers EWEF (#11 @ 12" c/c)

2-leg stirrup (#6 @ 12" c/c)

- 5'-exterior wall 4 layers EWEF (#11 @ 6" c/c)
2-leg stirrup (#6 @ 12" c/c)

Reinforcement drawings, details, and sketches are presented in Figure 3B-23 and Figure 3B-24.

A summary table of the element-based design check results for the wall at grid line E is presented in Table 3B-14. This summary table shows the maximum D/C ratios within each design check zone. All design check zones have no D/C exceedances. Based on the above results and evaluations, the wall is acceptable.

3B.2.3 Design Approach - Slabs

The slabs are designed using the same methodology as was used for the walls in Section 3B.1.1. The design check determines the D/C ratios for the north-south and east-west slab reinforcement including the various shear failure modes based on the combined demand forces and moments.

An iterative design check approach is used to determine the appropriate uniform reinforcement pattern for a given slab section based on the maximum combined design forces and moments. A representative slab shell element within the design check zone selected to demonstrate the element-based design check that is repeated for all shell elements within this slab. The demand forces and moments for the shell element in the design check zone combines the non-seismic (SAP2000) and seismic (SASSI2010) design value for performing the element-based design check.

The summary table of D/C ratios at each slab elevation shows the maximum D/C ratios within each design check zone. A separate check of averaging for slabs that contain elements exceeding the in-plane shear limit, or that contain elements exceeding shear friction limits is performed to ensure the D/C ratios are acceptable.

3B.2.3.1 Slab at EL. 100'-0"

The slab at EL. 100'-0" is at grade level and is 3 feet thick. The outer and inner perimeter of the slab is reinforced with shear reinforcement. The SAP2000 analysis model elevation view is shown in Figure 3B-25, along with the shell element labels.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

~~The uniform North-South and East-West reinforcement of the slab is listed below:~~

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

- 3'-floor slab at EL. 100'-0" 3 layers EWEF (#11 @ 12" c/c)
2-leg stirrup (#6 @ 12" c/c)

Reinforcement drawings and section details is presented in Figure 3B-26 and Figure 3B-27.

A summary table of the element-based design check results for the slab at EL 100'-0" is presented in Table 3B-15. This summary table shows the maximum D/C ratios within each design check zone and highlights the XZ plane shear exceedance. Table 3B-16 shows the element averaging for that exceedance. Table 3B-17 provides a summary of D/C ratios after averaging. Based upon the results shown in Table 3B-17, the slab at EL. 100'-0" is acceptable.

3B.2.3.2 Slab at EL. 181'-0"

The roof slab is a 4 foot thick slab that begins at EL. 163'-0", slopes inward for 29.5 feet, and is flat at EL. 181'-0". The SAP2000 analysis model elevation view is shown in Figure 3B-28, along with the shell element labels.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

~~The uniform north-south and east-west reinforcement of the slab is listed below:~~

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

- ~~4'-roof slab~~ ~~5 layers EWEF (#11 @ 12" c/c)~~
~~2 leg stirrup (#6 @ 12" c/c)~~

Reinforcement drawings and section details are presented in Figure 3B-29 and Figure 3B-30.

A summary table of the element-based design check results for the roof slab is presented in Table 3B-18. This summary table shows the maximum D/C ratios within each design check zone. All design check zones have no D/C exceedances. Based on the above results and evaluations, the roof slab is acceptable.

3B.2.3.3 Pilasters

Pilasters are added to the exterior walls of the RXB structure to increase the capacity at the corners and stiffness of the walls between the corners.

In the finite element model, the pilasters are modeled with frame elements with stiffness properties that represent the combined action of the walls (modeled with shell elements) and the pilasters. The forces in the artificially stiffened frame elements could be distributed to the pilaster and wall elements but for a conservative evaluation of the pilaster, the moments and the out of plane shear forces corresponding to the strong axis are compared to the capacity of the pilaster alone. Bending about the weak axis does not need to be evaluated because the pilaster is an integral part of the wall and bending in that direction is not local behavior. It is part of the in-plane behavior of the wall and the shell elements in this area have adequate reinforcing. The shear in the weak axis direction, parallel to the wall, does not need to be evaluated because the in-plane capacity of the wall is capable of accommodating the minor increase.

If the 5 feet by 10 feet pilaster can resist the resulting loads on its own, the pilaster is considered qualified. If the demand exceeds the capacity of the pilaster using the

conservative approach mentioned above, the adjacent wall elements are combined with the pilaster frame element and their combined capacity is compared to the combined demand for a more accurate evaluation.

The qualification of the pilasters compares the capacities of selected members with the demands and determines the demand to capacity ratios. In the structural model, the frame elements used to represent the pilasters are located at the center of the walls. Since the centroid of the pilaster is actually 2.5 feet outside the center of the wall, the strong axis bending moment is increased to account for this eccentricity by adding a moment equal to the axial force in the pilaster times the 2.5 feet offset. Also the moment in the frame element is at the top of the element which is at the centroid of a 3 feet thick slab. The moment for design should be taken at the bottom of the slab. The two effects are minor, tend to offset one another and therefore are not included in the design checks.

The capacity of the pilaster is based on the reinforcing steel in the 5 feet by 10 feet zone. While the pilaster does interact with the wall, the additional capacity gained by considering the interaction is relatively small and if some of the reinforcing in the walls were to be used, the demand to capacity ratio for the wall would be reduced.

A detailed explanation of the methodology for the design evaluation of the walls and slabs, also applicable to the pilasters in the RXB is presented in Section 3B.1.2. The SAP2000 and SASSI2010 combined design forces and moments are used for the design check. The design check determines the D/C ratios for the various failure modes based on the combined demand forces and moments.

An iterative design check approach is used to determine the appropriate uniform reinforcement pattern on each pilaster type based on the maximum combined design forces and moments. A representative pilaster frame element within the design check zone is selected to demonstrate the frame element design check that is repeated for all frame pilaster elements within this wall.

The pilasters in the RXB are designed for strong axis bending and strong axis shear only. This is due to the very long span in the weak axis direction (along the plane of the walls) that prevents the pilasters from failing. Similarly, the pilasters cannot realistically fail in torsion due to the fact that they are embedded into the 5 foot thick RXB walls. Therefore, torsion is also not considered. The following section presents a pilaster qualification using the pilaster section with the highest loads.

3B.2.4 Pilasters at Grid Line A

The pilasters on the wall at grid line A consist of five types of pilaster. The SAP2000 analysis model elevation view is shown in Figure 3B-31, along with the pilaster frame element labels.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

~~The longitudinal reinforcement and ties of the pilasters are listed below:~~

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

- | | |
|-----------------------------------|--|
| • Type 1 pilaster
- | 1 layer of 8 bundled (#11 @ 6" c/c)
6 tie wrap @ 12" c/c |
| • Type 2 pilaster
- | 2 layer of 8 bundled (#11 @ 6" c/c)
#6 tie wrap @ 12" c/c |
| • Type 3 pilaster
- | 3 layer of 8 bundled (#11 @ 6" c/c)
#6 tie wrap @ 12" c/c |
| • Type 4 pilaster
- | 6 layer of 8 bundled (#11 @ 6" c/c)
#6 tie wrap @ 12" c/c |
| • Type 5 pilaster
- | 6 layer of 8 bundled (#11 @ 6" c/c)
#6 tie wrap @ 6" c/c |

Reinforcement details are presented in Figure 3B-32 through Figure 3B-36 for the five pilaster types.

A summary table of the design check results for the pilasters on the wall at grid line A is presented in Table 3B-19. This summary table shows the maximum D/C ratios within each design check zone. All design check zones have no D/C exceedances and the results acceptable.

3B.2.5 Beams

A detailed explanation of the methodology for the design evaluation of the concrete walls and slabs, also applicable to the beams in the RXB is presented in Section 3B.1.2. The SAP2000 and SASSI2010 combined design forces and moments are used in the design check. The design check determines the D/C ratios for the various failure modes based on the combined demand forces and moments.

An iterative design check approach is used to determine the appropriate uniform reinforcement pattern on each beam type based on the maximum combined design forces and moments. A representative beam frame element within the design check zone is selected to demonstrate the frame element design check that is repeated for all beam frame elements within this group.

The beams in the RXB are designed for strong axis bending and strong axis shear only. This is due to the very long span in the weak axis direction (along the plane of the slabs) that prevents the beams from failing. Similarly, the beams cannot realistically fail in torsion due to the fact that they are embedded into the 3 foot thick RXB slabs. Therefore, torsion is also not considered.

The summary table of D/C ratios at each slab elevation shows the maximum D/C ratios within each design check zone.

3B.2.5.1 Beam at EL. 75'-0"

The slab at EL. 75'-0" contains six beam sections running east-west and 22 beam sections running north-south. The SAP2000 analysis model plan view is shown in Figure 3B-37, along with the frame element labels.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

~~The typical strong axis bending reinforcement and shear reinforcing is listed below:~~

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

- ~~5' x 2' T-beam section type 1 2 layers of 6 #11 (equally spaced)
#6 closed stirrups @ 12" on center~~
- ~~5' x 2' T-beam section type 2 3 layers of 6 #11 (equally spaced)
#6 closed stirrups @ 12" on center~~

The reinforcement details are shown in Figure 3B-38 and Figure 3B-39.

A summary table of the design check results for the beams at EL. 75'-0" is presented in Table 3B-20. This summary table shows the maximum D/C ratios within each design check zone. The D/C ratios are less than 1.0 and therefore the beams are acceptable.

3B.2.6 Buttresses

A detailed explanation of the methodology for the design evaluation of the walls and slabs, also applicable to the buttresses in the RXB is presented in Section 3B.1.2. The SAP2000 analysis model is used to determine the maximum non-seismic demand results for each buttress frame element. Similarly, the SASSI2010 analysis model is used to determine the seismic demand results, which are then combined with the SAP2000 results for each buttress frame element. The SAP2000 and SASSI2010 combined design forces and moments are used in the design check. The design check determines the D/C ratios for the various failure modes based on the combined demand forces and moments.

An iterative design check approach is used to determine the appropriate uniform reinforcement pattern on each buttress type based on the maximum combined design forces and moments. A representative element within the design check zone is selected to demonstrate the frame element design check that is repeated for all elements within this group.

The buttresses in the RXB are designed for strong axis bending and strong axis shear only. This is due to the very long span in the weak axis direction (along the plane of the slabs) that prevents the buttresses from failing. Similarly, the buttresses cannot realistically fail in torsion due to the fact that they are embedded into the 5 foot thick RXB slabs. Therefore, torsion is also not considered.

3B.2.6.1 Buttness at EL. 126'-0"

The wall at grid line 1 has two buttresses. These are at elevations 126'-0" and 145'-6". The buttress at EL. 126'-0" is evaluated. The SAP2000 analysis model plan view is shown in Figure 3B-40, along with the frame element labels.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

~~The typical strong axis bending reinforcement and shear reinforcement is listed below:~~

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

- ~~Buttness type 1- 1 layer of 8 bundled (#11 @ 12" c/c) #6 tie wrap @ 12" c/c~~

The reinforcement details are shown in Figure 3B-41.

A summary table of the design check results for the beams at elevation 126'-0" is presented in Table 3B-21. This summary table shows the maximum D/C ratios within each design check zone. The D/C ratios are less than 1.0 and therefore the buttress is acceptable.

3B.2.7 NuScale Power Module Bay

The NPM bays are 3-walled compartments located in the reactor pool and are designed to house the NPMs during operation. Each bay is 20'-6" wide in the north-south direction and 19'-7" deep in the east-west direction, and extends from the pool floor at EL. 25'-0" up to EL. 125'-0". The bottom of the bay is the RXB foundation slab. The walls which make up the bay are 5 feet thick reinforced concrete. The top of the bay is capped with the Bioshield during operation. The bay provides restraints to prevent the NPM from moving laterally. Restraint is provided via a NPM skirt restraint located at EL. 25'-0" and lug restraints located on the three bay walls at EL. 71'-7".

3B.2.7.1 West Wing Wall

The west wing wall is one of the walls at grid line 4. The SAP2000 analysis model elevation view is shown in Figure 3B-42, along with the shell element labels. The west wing walls have the refueling pool on one side and an NPM located on the other. (See Figure 3B-52). Because of this location, it experiences the highest forces of the NPM bay wing walls.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

~~The uniform horizontal and vertical reinforcement of the wall including the shear reinforcement is listed below:~~

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

- ~~5' wing wall 3 layers of 3 bundled (#11 @ 12" c/c) 2 headed bars (#8 @ 24" c/c)~~

Reinforcement drawings and section details are presented in Figure 3B-43 and Figure 3B-44.

A summary table of the element-based design check results for the wall at Grid Line 4 is presented in Table 3B-22. This summary table shows the maximum D/C ratios within each design check zone. All design check zones have no D/C exceedances. Based on the above results and evaluations, the west wing wall is acceptable.

3B.2.7.2 Pool Wall

The portion of the pool wall that supports the NPMs is part of the wall at grid line B. This is an interior wall of the RXB that is 5 feet thick. The SAP2000 analysis model elevation view is shown in Figure 3B-45, along with the shell element labels.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

~~The uniform horizontal and vertical reinforcement of the wall including the shear reinforcement is listed below:~~

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

- ~~5'-pool wall~~ 4 layers EWEF (#11 @ 12" c/c)
2-leg stirrup (#6 @ 12" c/c)

Reinforcement drawings and section details are presented in Figure 3B-46 and Figure 3B-47.

A summary table of the element-based design check results for the wall at grid line B is presented in Table 3B-23. This summary table shows the maximum D/C ratios within each design check zone and highlights the YZ plane shear exceedance. Table 3B-24 shows the element averaging for that exceedance. Table 3B-25 provides a summary of D/C ratios after averaging.

RAI 03.07.02-20, RAI 03.08.04-31

3B.2.7.3 NuScale Power Module Passive Support Skirt Ring Assembly

RAI 03.07.02-20

The base of the NPM is located at the bottom of the RXB pool at EL. 25'-0". There are up to 12 NPMs located in the RXB pool in their respective bays. The pool floor liner in the NPM bay is made of half-inch thick stainless steel ~~where as~~ whereas the wall liner is made of quarter-inch stainless steel.

RAI 03.07.02-20

The NPM is vertically supported for the dead load and seismic loads acting downwards at the base, but free to move up vertically for any uplifting forces (such as seismic load acting upwards and buoyant forces due to the water in the reactor pool). The NPM is also laterally restrained against seismic forces at the base.

RAI 03.07.02-20

- Tensile Strength - 90 ksi (A615 Grade 60), 80 ksi (A706 Grade 60)
- Elongation - See ASTMs A615 and A706
- Structural Steel
 - Grade - ASTM A992 (W shapes), ASTM A500 Grade B (Tube Steel), ASTM A36 (plates)
 - Ultimate Tensile Strength - 65 ksi A992, 58 ksi A500 Grade B and A36
 - Yield Stress - 50 ksi A992, 46 ksi A500 Grade B, 36 ksi A36
- Foundation Media

For a description of the soils considered in the design of the CRB, see Section 3.8.5.4.2 and Section 3.7.1.3.1.

Structural Loads

The structural loads for the CRB are discussed in detail in Sections 3.7.1 and 3.8.4 for seismic and non-seismic loads respectively.

Structural Analysis and Design

- Design Computations of Critical Elements

The design methodology of CRB related Critical Elements is discussed in Section 3B.1. Specific CRB Critical Elements analyzed are discussed in Section 3B.3.

- Stability Calculations

Stability of the CRB is addressed in Section ~~3.8.5.4.2~~ 3.8.5.4.1.3, Section 3.8.5.4.1.4, Section 3.8.5.5, and Section 3.8.5.6.2.

Summary of Results

See Section 3B.3.2 through Section 3B.3.5

Conclusions

The D/C ratios presented are all less than 1.0. Therefore, the Critical Elements satisfy the design criteria for loading investigated.

3B.3.2 Walls

3B.3.2.1 Wall at Grid Line 3

The wall at grid line 3 is an interior structural wall between EL. 50'-0" and EL. 120'-0" of the CRB. This wall is 2 feet thick. The SAP2000 analysis model elevation view is shown in Figure 3B-65, along with the shell element labels.

RAI 03.08.04-36

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

The uniform horizontal and vertical reinforcing of the wall is listed below:

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

- 2' interior wall2 layers EWEF (#9 @ 12" c/c)

Reinforcement drawings and details are presented in Figure 3B-66 and Figure 3B-67.

RAI 03.08.04-36

A summary table of the element-based design check results for the wall at grid line 3 is presented in ~~Table 3B-26~~Table 3B-28. This summary table shows the maximum D/C ratios within each design check zone. As ~~noted~~shown in ~~Table 3B-26~~Table 3B-28, all design check zones have no D/C exceedances. Based on the above results and evaluations, the wall is acceptable.

3B.3.2.2

Wall at Grid Line 4

The wall at grid line 4 is an exterior structural wall on the east side of the CRB that is 3 feet thick. The SAP2000 analysis model elevation view is shown in Figure 3B-68, along with the shell element labels.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

The uniform horizontal and vertical reinforcing of the wall is listed below:

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

- 3' exterior wall from EL. 50'-0" to EL. 100'-0"2 layers EWEF (#11 @ 12" c/c)
1-leg stirrup (#6 @ 12" c/c)
- 3' exterior wall at Selected Locations2 layers EWEF (#11 @ 12" c/c)
2-leg stirrup (#6 @ 12" c/c)
- 3' exterior wall above EL 100'-0"2 layers EWEF (#11 @ 12" c/c)

Reinforcement drawings and details are presented in Figure 3B-69 and Figure 3B-70.

RAI 03.08.04-36

A summary table of the element-based design check results for the wall at grid line 4 is presented in ~~Table 3B-27~~Table 3B-29. This summary table shows the maximum D/C ratios within each design check zone. As ~~noted~~shown in ~~Table 3B-27~~Table 3B-29, certain design check zones have D/C ratios in excess of 1.0.

RAI 03.08.04-36

The wall at grid line 4 was experiencing out of plane shear exceedances in the YZ plane as shown in ~~Table 3B-27~~Table 3B-29. In order to satisfy the demand, the

section experiencing high out of plane shear was reinforced with an additional #6 stirrup leg. This is shown in Figure 3B-70. ~~Table 3B-28~~[Table 3B-30](#) shows the design check of the worst shell element in the section, number 786, with the additional shear reinforcement. The final design check is provided in ~~Table 3B-28~~[Table 3B-30](#). Based on ~~Table 3B-29~~[Table 3B-31](#), where the capacity includes the added reinforcement, the wall at grid line 4 is acceptable.

3B.3.2.3

Wall at Grid Line A

The wall at grid line A is an exterior structural wall on the north side of the CRB that is 3 feet thick. The SAP2000 analysis model elevation view is shown in Figure 3B-71, along with the shell element labels.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

The uniform horizontal and vertical reinforcing of the wall is listed below:

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

- 3' exterior wall from EL. 50'-0" to EL. 100'-0"

2 layers EWEF (#11 @ 12" c/c)
1 leg stirrup (#6 @ 12" c/c)
- 3' exterior wall above EL. 100'-0"

2 layers EWEF (#11 @ 12" c/c)

Reinforcement drawings and details are presented in Figure 3B-72 and Figure 3B-73.

RAI 03.08.04-36

A summary table of the element-based design check results for the wall at grid line A are presented in ~~Table 3B-30~~[Table 3B-32](#). This summary table shows the maximum D/C ratios within each design check zone. Based on ~~Table 3B-30~~[Table 3B-32](#), all design check zones have no D/C exceedances. Based on the above results and evaluations, the wall is acceptable.

RAI 03.08.04-36

In-plane shear for the adequacy of concrete wall thickness was checked for all elements in the CRB. Several individual elements in the walls encountered in-plane shear exceedances. Where individual elements in the wall at grid line A exceed in-plane shear limits, the elements are averaged as shown in ~~Table 3B-31~~[Table 3B-33](#). The cross-section was checked based on calculating the average in-plane shear over the entire wall section, and is acceptable.

3B.3.3

Slabs

3B.3.3.1

Basemat Foundation

RAI 03.08.04-36

Likewise, the demand forces and moments for the CRB foundation tunnel are listed in ~~Table 3B-36~~[Table 3B-38](#). The design check for the various failure modes of the CRB foundation tunnel are shown in ~~Table 3B-39~~[Table 3B-41](#).

3B.3.3.2

Slab EL. 100'-0"

The slab at EL. 100'-0" is at grade and houses the main technical support and data area for the CRB. This elevation consists of a 3' slab and 2' slab along with a 3' tunnel slab. The SAP2000 analysis model elevation view is shown in Figure 3B-77, along with the shell element labels.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

~~The uniform north-south and east-west reinforcing of the slab is listed below:~~

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

- | | |
|-----------------------------|---|
| • 3' floor slab | 1 layer EWEF (#11 @ 12" c/c) |
| • 2' floor slab | 1 layer EWEF (#11 @ 12" c/c) |
| • 3' tunnel slab | 2 layer EWEF (#11 @ 12" c/c)
1 leg stirrups (#6 @ 12" c/c) |

Reinforcement drawings and details are presented in Figure 3B-78 and Figure 3B-79.

RAI 03.08.04-36

A summary table of the element-based design check results for the slab at EL. 100'-0" is presented in ~~Table 3B-40~~[Table 3B-42](#). This summary table shows the maximum D/C ratios within each design check zone. ~~Table 3B-44~~[Table 3B-46](#) provides a summary of D/C ratios after averaging. The tables showing the averaging performed are ~~Table 3B-41~~[Table 3B-43](#) through ~~Table 3B-43~~[Table 3B-45](#).

RAI 03.08.04-36

Shear friction was checked for all elements in the CRB. Some individual elements in the slabs encountered shear friction exceedances. For elements that exceed shear friction limits in the slab at EL. 100'-0", their averaging is shown in ~~Table 3B-46~~[Table 3B-47](#).

3B.3.4

Pilasters

3B.3.4.1

Pilasters Grid Line 1

The pilasters on the wall at grid line 1 consist of two types of pilasters. The SAP2000 analysis model elevation view is shown in Figure 3B-80, along with the pilaster frame element labels.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

The longitudinal reinforcing and ties of the pilasters are listed below:

- RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17
- pilaster at grid line 1B (Type 2)1 layer of 7 #11 (equally spaced)
6 tie wraps @ 12" c/c
 - pilaster at grid line 1C (Type 1)2 layers of 7 #11 (equally spaced)
6 tie wraps @ 12" c/c

Reinforcement details are presented in Figure 3B-81 and Figure 3B-82 for pilaster Type 1 and Type 2, respectively.

RAI 03.08.04-36

A summary table of the design check results for the pilasters on the wall at Grid Line 1 is presented in ~~Table 3B-46~~Table 3B-48. This summary table shows the maximum D/C ratios within each design check zone. As noted in ~~Table 3B-46~~Table 3B-48, all design check zones have D/C ratios that are less than 1.0; and therefore, the pilasters are acceptable.

3B.3.5T-Beams

3B.3.5.1T-Beams at EL. 120'-0"

The slab at elevation 120'-0" contains six T-beam sections running east-west and two T-beam sections running north-south. The SAP2000 analysis model plan view is shown in Figure 3B-83, along with the frame element labels.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

The typical strong axis bending reinforcement and shear reinforcing is listed below:

- RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17
- 3' x 2' T-beam section (Type 1)2 layers of 6 #9 (equally spaced)
#6 closed stirrups @ 12" on center
 - 3' x 2' T-beam section (Type 2)2 layers of 6 #11 (equally spaced)
#6 closed stirrups @ 12" on center

The reinforcement details are shown in Figure 3B-84 and Figure 3B-85 for Type 1 and Type 2, respectively.

RAI 03.08.04-36

A summary table of the design check results for the beams at elevation 120'-0" is presented in ~~Table 3B-47~~Table 3B-49. This summary table shows the maximum D/C ratios within each design check zone. As ~~noted~~shown in ~~Table 3B-47~~Table 3B-49, all design check zones have D/C ratios that are less than 1.0; therefore the T-Beams at elevation 120'-0" are all acceptable.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Table 3B-2: Summary of D/C Ratios for Reactor Building Wall at Grid Line 1

Demand/Capacity Ratios									
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	# Elems Checked
RXB;1;E-D;24-50	D/C Ratio	0.35	0.11	0.62	0.49	0.49	0.39	5'-0" Exterior Wall Below Grade; 6 Layers-EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	20
	Element	2580	2581	2578	2577	3902	2578		
RXB;1;D-C;24-50	D/C Ratio	0.26	0.10	0.30	0.32	0.33	0.47	5'-0" Exterior Wall Below Grade; 6 Layers-EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	24
	Element	3907	3221	2583	2583	3221	2583		
RXB;1;C-B;24-50	D/C Ratio	0.25	0.08	0.28	0.32	0.36	0.51	5'-0" Exterior Wall Below Grade; 6 Layers-EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	24
	Element	3918	2593	2592	2592	3232	2591		
RXB;1;B-A;24-50	D/C Ratio	0.34	0.11	0.53	0.44	0.54	0.37	5'-0" Exterior Wall Below Grade; 6 Layers-EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	20
	Element	2595	3923	2597	2598	3923	2595		
RXB;1;E-D;50-75	D/C Ratio	0.32	0.09	0.41	0.36	0.41	0.07	5'-0" Exterior Wall Below Grade; 6 Layers-EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	20
	Element	7729	5575	7725	5575	5575	7727		
RXB;1;D-C;50-75	D/C Ratio	0.30	0.07	0.32	0.23	0.28	0.34	5'-0" Exterior Wall Below Grade; 6 Layers-EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	24
	Element	7730	5581	7735	5585	6139	7734		
RXB;1;C-B;50-75	D/C Ratio	0.35	0.08	0.39	0.23	0.28	0.31	5'-0" Exterior Wall Below Grade; 6 Layers-EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	24
	Element	7737	5590	7736	5591	6150	5588		
RXB;1;B-A;50-75	D/C Ratio	0.29	0.09	0.46	0.38	0.44	0.18	5'-0" Exterior Wall Below Grade; 6 Layers-EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	20
	Element	7746	5596	7746	6155	5596	5593		
RXB;1;E-D;75-100	D/C Ratio	0.38	0.15	0.62	0.40	0.33	0.09	5'-0" Exterior Wall Below Grade; 8 Layers-EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	14
	Element	8843	8843	10386	10386	8839	11155		
RXB;1;D-C;75-100	D/C Ratio	0.45	0.14	0.46	0.27	0.19	0.37	5'-0" Exterior Wall Below Grade; 8 Layers-EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	24
	Element	10391	10391	10392	10392	10391	10391		
RXB;1;D-C;75-100	D/C Ratio	0.45	0.14	0.46	0.27	0.19	0.37	5'-0" Exterior Wall Below Grade; 8 Layers-EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	24
	Element	10391	10391	10392	10392	10391	10392		

Tier 2

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Table 3B-2: Summary of D/C Ratios for Reactor Building Wall at Grid Line 1 (Continued)

		Demand/Capacity Ratios						Description	# Elems Checked
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear		
RXB;1;C-B;75-100	D/C Ratio	0.83	0.29	0.71	0.25	0.13	0.31	5'-0" Exterior Wall Below Grade; 8 Layers-EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	22
	Element	11167	11167	11167	9442	11166	10393		
RXB;1;B-A;75-100	D/C Ratio	0.36	0.12	0.45	0.36	0.34	0.15	5'-0" Exterior Wall Below Grade; 8 Layers-EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	20
	Element	11172	11172	11176	8860	8860	11173		
RXB;1;E-D;100-126	D/C Ratio	0.33	0.04	0.41	0.19	0.17	0.08	5'-0" Exterior Wall Above Grade; 8 Layers-EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	20
	Element	12319	12318	12316	12315	12315	12315		
RXB;1;D-C;100-126	D/C Ratio	0.47	0.10	0.42	0.09	0.10	0.08	5'-0" Exterior Wall Above Grade; 8 Layers-EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	24
	Element	13542	13542	12322	12320	13537	12325		
RXB;1;C-B;100-126	D/C Ratio	0.64	0.19	0.87	0.41	0.10	0.14	5'-0" Exterior Wall Above Grade; 8 Layers-EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	8
	Element	12326	12326	13544	13544	13544	12326		
RXB;1;B-A;100-126	D/C Ratio	0.45	0.10	0.49	0.20	0.21	0.09	5'-0" Exterior Wall Above Grade; 8 Layers-EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	20
	Element	13545	13545	12717	12332	12331	12331		
RXB;1;E-D;126-145	D/C Ratio	0.22	0.02	0.27	0.12	0.32	0.27	5'-0" Exterior Wall Above Grade; 8 Layers-EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	20
	Element	14613	15238	14612	14609	15580	15580		
RXB;1;D-C;126-145	D/C Ratio	0.37	0.10	0.31	0.09	0.17	0.15	5'-0" Exterior Wall Above Grade; 8 Layers-EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	24
	Element	14619	14619	14614	14929	15581	15581		
RXB;1;C-B;126-145	D/C Ratio	0.62	0.15	0.66	0.29	0.21	0.24	5'-0" Exterior Wall Above Grade; 8 Layers-EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	24
	Element	14621	14621	14625	14625	15592	15592		
RXB;1;B-A;126-145	D/C Ratio	0.30	0.09	0.31	0.16	0.35	0.33	5'-0" Exterior Wall Above Grade; 8 Layers-EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	20
	Element	14626	14626	14626	14936	15593	15593		
RXB;1;E-D;145-163	D/C Ratio	0.20	0.01	0.23	0.07	0.32	0.08	5'-0" Exterior Wall Above Grade; 6 Layers-EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	20
	Element	16645	16944	16046	16044	16047	16047		

Table 3B-2: Summary of D/C Ratios for Reactor Building Wall at Grid Line 1 (Continued)

Section		Demand/Capacity Ratios						Description	# Elems Checked
		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear		
RXB;1;D-C;145-163	D/C Ratio	0.33	0.01	0.34	0.08	0.12	0.08	5'-0" Exterior Wall Above Grade; 6 Layers- EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	24
	Element	16651	16950	16352	16048	16048	16048		
RXB;1;C-B;145-163	D/C Ratio	0.46	0.03	0.51	0.12	0.11	0.09	5'-0" Exterior Wall Above Grade; 6 Layers- EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	24
	Element	16058	16059	16058	16059	16059	16059		
RXB;1;B-A;145-163	D/C Ratio	0.26	0.02	0.31	0.11	0.35	0.08	5'-0" Exterior Wall Above Grade; 6 Layers- EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	20
	Element	16658	16359	16359	16060	16060	16060		
RXB;1;E-D;163-181	D/C Ratio	0.20	0.03	0.20	0.06	0.16	0.18	5'-0" Exterior Wall Above Grade; 6 Layers- EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	14
	Element	17248	14893	17245	17245	17245	17245		
RXB;1;D-C;163-181	D/C Ratio	0.38	0.04	0.43	0.07	0.13	0.16	5'-0" Exterior Wall Above Grade; 6 Layers- EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	24
	Element	17949	17949	17949	17949	17944	17948		
RXB;1;C-B;163-181	D/C Ratio	0.40	0.03	0.47	0.08	0.14	0.16	5'-0" Exterior Wall Above Grade; 6 Layers- EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	24
	Element	17257	17950	17950	17950	17955	17951		
RXB;1;B-A;163-181	D/C Ratio	0.24	0.08	0.23	0.07	0.14	0.05	5'-0" Exterior Wall Above Grade; 6 Layers- EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	14
	Element	17541	15191	17261	17264	17956	17570		

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17, RAI 03.08.04-34

Table 3B-3: Summary of D/C Ratios for Reactor Building Wall at Grid Line 3

Demand/Capacity Ratios									
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	# Elems Checked
RXB;3;D-C;24-50	D/C Ratio	1.44	1.04	1.40	0.72	0.60	0.26	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	84
	Element	4951	4942	4951	4951	4942	4946		
RXB;3;E-D;126-145	D/C Ratio	0.29	0.07	0.43	0.14	0.05	0.09	4'-0" Interior Wall; 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	2
	Element	15318	15318	15318	15318	15655	15655		
RXB;3;B-A;126-145	D/C Ratio	0.29	0.07	0.44	0.15	0.05	0.08	4'-0" Interior Wall; 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	2
	Element	15319	15319	15319	15319	15656	15656		
RXB;3;E-D;145-163	D/C Ratio	1.19	0.60	0.71	0.16	0.10	0.06	4'-0" Interior Wall; 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	16
	Element	16128	16128	16128	16131	16128	16131		
RXB;3;B-A;145-163	D/C Ratio	1.20	0.60	0.72	0.16	0.09	0.06	4'-0" Interior Wall; 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	16
	Element	16135	16135	16135	16132	16135	16132		
RXB;3;E-D;163-181	D/C Ratio	0.25	0.10	0.44	0.08	0.08	0.05	4'-0" Interior Wall; 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	10
	Element	14897	17545	15226	17545	17707	17573		
RXB;3;B-A;163-181	D/C Ratio	0.29	0.10	0.43	0.08	0.08	0.05	4'-0" Interior Wall; 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	10
	Element	14898	17546	15227	17546	17708	17574		

Note:Highlighted items indicate those design check zones that exceed a D/C ratio of 0.8.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17, RAI 03.08.04-34

Table 3B-7: Summary of D/C Ratios for Reactor Building Wall at Grid Line 3 After Averaging Affected Elements

Demand/Capacity Ratios									
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	# Elems Checked
RXB;3;D-C;24-50	D/C Ratio	0.75	0.61	0.70	0.72	0.60	0.26	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	84
	Element	4951	4942	4951	4951	4942	4946		
RXB;3;E-D;126-145	D/C Ratio	0.29	0.07	0.43	0.14	0.05	0.09	4'-0" Interior Wall; 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	2
	Element	15318	15318	15318	15318	15655	15655		
RXB;3;B-A;126-145	D/C Ratio	0.29	0.07	0.44	0.15	0.05	0.08	4'-0" Interior Wall; 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	2
	Element	15319	15319	15319	15319	15656	15656		
RXB;3;E-D;145-163	D/C Ratio	0.75	0.60	0.71	0.16	0.10	0.06	4'-0" Interior Wall; 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	16
	Element	16128	16128	16128	16131	16128	16131		
RXB;3;B-A;145-163	D/C Ratio	0.75	0.60	0.72	0.16	0.09	0.06	4'-0" Interior Wall; 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	16
	Element	16135	16135	16135	16132	16135	16132		
RXB;3;E-D;163-181	D/C Ratio	0.25	0.10	0.44	0.08	0.08	0.05	4'-0" Interior Wall; 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	10
	Element	14897	17545	15226	17545	17707	17573		
RXB;3;B-A;163-181	D/C Ratio	0.29	0.10	0.43	0.08	0.08	0.05	4'-0" Interior Wall; 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	10
	Element	14898	17546	15227	17546	17708	17574		

Note:

The highlighted values of the D/C ratios for the corresponding element shown in this table is based on the averaged demand values using methodology shown in Section 3B.1.1.1. It should be noted that the D/C ratios of all other elements shown in this table will be proportionally reduced if the same averaging methodology is used.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17, RAI 03.08.04-34

Table 3B-8: Summary of D/C Ratios for Reactor Building Wall at Grid Line 4

Demand/Capacity Ratios									
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	# Elems Checked
RXB;4;D-C;24-50	D/C Ratio	0.40	0.19	0.68	0.76	0.24	0.83	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	16
	Element	4638	4638	3071	3071	4638	3071		
RXB;4;C-B;24-50	D/C Ratio	0.38	0.17	0.67	0.74	0.25	0.82	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	16
	Element	4645	4645	3072	3072	4645	3072		
RXB;4;D-C;50-75	D/C Ratio	0.38	0.22	0.62	0.42	0.46	0.39	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	20
	Element	8070	8070	8073	5781	7300	7300		
RXB;4;C-B;50-75	D/C Ratio	0.40	0.22	0.62	0.42	0.50	0.42	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	20
	Element	8077	8077	8074	5782	7307	7307		
RXB;4;D-C;75-100	D/C Ratio	0.32	0.18	0.61	0.40	0.39	0.41	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	16
	Element	11582	9082	9678	9678	11582	11585		
RXB;4;C-B;75-100	D/C Ratio	0.33	0.18	0.61	0.41	0.41	0.44	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	16
	Element	11589	9089	9679	9679	11589	11586		
RXB;4;D-C;100-126	D/C Ratio	0.95	0.35	0.48	0.29	0.38	0.28	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	16
	Element	13686	13686	13686	12459	12456	12459		
RXB;4;C-B;100-126	D/C Ratio	0.96	0.36	0.48	0.30	0.40	0.30	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	16
	Element	13693	13693	13693	12460	12463	12460		
RXB;4;E-D;126-145	D/C Ratio	0.35	0.11	0.49	0.22	0.06	0.12	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	2
	Element	15364	15364	15364	15364	15701	15701		
RXB;4;B-A;126-145	D/C Ratio	0.35	0.11	0.49	0.22	0.06	0.12	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	2
	Element	15365	15365	15365	15365	15702	15702		
RXB;4;E-D;145-163	D/C Ratio	1.07	0.76	0.64	0.21	0.08	0.08	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	16
	Element	16180	16180	16180	16183	16180	16183		
RXB;4;B-A;145-163	D/C Ratio	1.07	0.75	0.64	0.21	0.09	0.08	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	16
	Element	16187	16187	16187	16184	16187	16184		

Tier 2

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Table 3B-8: Summary of D/C Ratios for Reactor Building Wall at Grid Line 4 (Continued)

Demand/Capacity Ratios									
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	# Elems Checked
RXB;4;E-D;163-181	D/C Ratio	0.23	0.11	0.34	0.11	0.05	0.04	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	10
	Element	17547	17547	15228	17547	17709	17709		
RXB;4;B-A;163-181	D/C Ratio	0.27	0.11	0.32	0.11	0.05	0.04	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	10
	Element	14900	17548	15229	17548	17710	17710		

Note:

Highlighted items indicate those design check zones that exceed a D/C ratio of 0.8.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17, RAI 03.08.04-34

Table 3B-10: Summary of D/C Ratios for RXB Wall at Grid Line 4 After Averaging Affected Elements

		Demand/Capacity Ratios						Description	# Elems Checked
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear		
RXB;4;D-C;24-50	D/C Ratio	0.40	0.19	0.68	0.76	0.24	0.83	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	16
	Element	4638	4638	3071	3071	4638	3071		
RXB;4;C-B;24-50	D/C Ratio	0.38	0.17	0.67	0.74	0.25	0.82	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	16
	Element	4645	4645	3072	3072	4645	3072		
RXB;4;D-C;50-75	D/C Ratio	0.38	0.22	0.62	0.42	0.46	0.39	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	20
	Element	8070	8070	8073	5781	7300	7300		
RXB;4;C-B;50-75	D/C Ratio	0.40	0.22	0.62	0.42	0.50	0.42	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	20
	Element	8077	8077	8074	5782	7307	7307		
RXB;4;D-C;75-100	D/C Ratio	0.32	0.18	0.61	0.40	0.39	0.41	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	16
	Element	11582	9082	9678	9678	11582	11585		
RXB;4;C-B;75-100	D/C Ratio	0.33	0.18	0.61	0.41	0.41	0.44	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	16
	Element	11589	9089	9679	9679	11589	11586		
RXB;4;D-C;100-126	D/C Ratio	0.95	0.35	0.48	0.29	0.38	0.28	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	16
	Element	13686	13686	13686	12459	12456	12459		
RXB;4;C-B;100-126	D/C Ratio	0.96	0.36	0.48	0.30	0.40	0.30	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	16
	Element	13693	13693	13693	12460	12463	12460		
RXB;4;E-D;126-145	D/C Ratio	0.35	0.11	0.49	0.22	0.06	0.12	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	2
	Element	15364	15364	15364	15364	15701	15701		
RXB;4;B-A;126-145	D/C Ratio	0.35	0.11	0.49	0.22	0.06	0.12	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	2
	Element	15365	15365	15365	15365	15702	15702		
RXB;4;E-D;145-163	D/C Ratio	0.56	0.76	0.64	0.21	0.08	0.08	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	16
	Element	16180	16180	16180	16183	16180	16183		
RXB;4;B-A;145-163	D/C Ratio	0.56	0.75	0.64	0.21	0.09	0.08	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	16
	Element	16187	16187	16187	16184	16187	16184		

Table 3B-10: Summary of D/C Ratios for RXB Wall at Grid Line 4 After Averaging Affected Elements (Continued)

Demand/Capacity Ratios									
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	# Elems Checked
RXB;4;E-D;163-181	D/C Ratio	0.23	0.11	0.34	0.11	0.05	0.04	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	10
	Element	17547	17547	15228	17547	17709	17709		
RXB;4;B-A;163-181	D/C Ratio	0.27	0.11	0.32	0.11	0.05	0.04	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	10
	Element	14900	17548	15229	17548	17710	17710		

Note:

The highlighted values of the D/C ratios for the corresponding element shown in this table is based on the averaged demand values using methodology shown in Section 3B.1.1.1. It should be noted that the D/C ratios of all other elements shown in this table will be proportionally reduced if the same averaging methodology is used.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17, RAI 03.08.04-34

Table 3B-11: Summary of D/C Ratios for RXB Wall at Grid Line 6

		Demand/Capacity Ratios						Description	# Elems Checked
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear		
RXB;6;D-C.5;24-50	D/C Ratio	0.23	0.09	0.47	0.35	0.22	0.28	7'-6" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	12
	Element	3745	4884	3164	3164	4884	4885		
RXB;6;C.5-C;24-50	D/C Ratio	0.29	0.07	0.35	0.28	0.09	0.28	5'-0" Pool Wall (0.25" on one side for liner plate); 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	12
	Element	4887	4887	4887	3167	4357	4889		
RXB;6;C-B.5;24-50	D/C Ratio	0.29	0.07	0.33	0.28	0.10	0.29	5'-0" Pool Wall (0.25" on one side for liner plate); 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	12
	Element	4892	4892	4891	3172	4362	4890		
RXB;6;B.5-B;24-50	D/C Ratio	0.30	0.11	0.50	0.38	0.24	0.58	7'-6" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	15
	Element	2060	2060	2060	2060	4895	2060		
RXB;6;D-C.5;50-75	D/C Ratio	0.38	0.17	0.33	0.26	0.38	0.42	7'-6" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	15
	Element	7463	8202	6577	6577	8202	8203		
RXB;6;C-5-C;50-75	D/C Ratio	0.32	0.09	0.34	0.20	0.16	0.27	5'-0" Pool Wall (0.25" on one side for liner plate); 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	15
	Element	7151	8205	7467	6026	6580	8205		
RXB;6;C-B.5;50-75	D/C Ratio	0.36	0.11	0.34	0.21	0.07	0.26	5'-0" Pool Wall (0.25" on one side for liner plate); 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	15
	Element	8209	8209	7470	6029	7470	8210		
RXB;6;B.5-B;50-75	D/C Ratio	0.35	0.14	0.31	0.26	0.31	0.50	7'-6" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	15
	Element	7473	8212	6032	8213	6032	8213		
RXB;6;D-C.5;75-100	D/C Ratio	0.33	0.13	0.28	0.19	0.28	0.21	7'-6" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	12
	Element	9362	9362	9362	9362	9955	11678		
RXB;6;C.5-C;75-100	D/C Ratio	0.40	0.08	0.39	0.15	0.04	0.11	5'-0" Pool Wall (0.25" on one side for liner plate); 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	12
	Element	11681	9365	11682	9365	9958	11681		
RXB;6;C-B.5;75-100	D/C Ratio	0.41	0.08	0.39	0.15	0.04	0.11	5'-0" Pool Wall (0.25" on one side for liner plate); 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	12
	Element	11686	9963	11685	9370	9963	11686		

Table 3B-11: Summary of D/C Ratios for RXB Wall at Grid Line 6 (Continued)

		Demand/Capacity Ratios						Description	# Elems Checked
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear		
RXB;6;B.5-B;75-100	D/C Ratio	0.33	0.13	0.28	0.19	0.28	0.21	7'-6" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	12
	Element	9373	9373	9373	9373	9966	11689		
RXB;6;D-C.5;100-126	D/C Ratio	0.48	0.09	0.44	0.14	0.20	0.15	7'-6" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	12
	Element	13878	13878	13468	13878	13878	13466		
RXB;6;C.5-C;100-126	D/C Ratio	0.53	0.09	0.58	0.14	0.04	0.15	5'-0" Pool Wall (0.25" on one side for liner plate); 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	11
	Element	13469	12986	13470	12986	13881	13469		
RXB;6;C-B.5;100-126	D/C Ratio	0.53	0.09	0.58	0.14	0.04	0.15	5'-0" Pool Wall (0.25" on one side for liner plate); 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	11
	Element	13471	12991	13471	12991	13886	13472		
RXB;6;B.5-B;100-126	D/C Ratio	0.48	0.09	0.44	0.15	0.20	0.15	7'-6" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	12
	Element	13889	13889	13473	13889	13889	13475		
RXB;6;E-D;126-145	D/C Ratio	0.61	0.20	0.64	0.22	0.12	0.12	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	2
	Element	15845	15845	15845	15845	15845	15845		
RXB;6;D-C;126-145	D/C Ratio	1.27	0.59	0.40	0.19	0.33	0.14	5'-0" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	24
	Element	15846	15846	15495	15137	15846	14842		
RXB;6;C-B;126-145	D/C Ratio	1.27	0.59	0.39	0.19	0.33	0.13	5'-0" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	24
	Element	15857	15857	15506	15148	15857	14851		
RXB;6;B-A;126-145	D/C Ratio	0.61	0.20	0.64	0.22	0.12	0.12	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	2
	Element	15858	15858	15858	15858	15858	15858		
RXB;6;E-D;145-163	D/C Ratio	1.46	0.61	0.60	0.18	0.17	0.06	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	16
	Element	16295	16295	16295	16594	16295	17189		
RXB;6;B-A;145-163	D/C Ratio	1.47	0.61	0.60	0.18	0.17	0.05	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	16
	Element	16296	16296	16296	16595	16296	17196		
RXB;6;E-D;163-181	D/C Ratio	0.28	0.12	0.35	0.16	0.20	0.11	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	10
	Element	14903	14903	17385	14903	17713	17579		

Table 3B-11: Summary of D/C Ratios for RXB Wall at Grid Line 6 (Continued)

Demand/Capacity Ratios									
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	# Elems Checked
RXB;6;B-A;163-181	D/C Ratio	0.28	0.12	0.35	0.16	0.20	0.11	4'-0" Interior Wall; 6 Layers EWEF (#11- @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	10
	Element	14904	15201	17390	15201	17714	17580		

Note:
Highlighted items indicate those design check zones that exceed a D/C ratio of 0.8.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17, RAI 03.08.04-34

Table 3B-13: Summary of D/C Ratios for Reactor Building Wall at Grid Line 6 after Averaging Affected Elements

Demand/Capacity Ratios									
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	# Elems Checked
RXB;6;D-C.5;24-50	D/C Ratio	0.23	0.09	0.47	0.35	0.22	0.28	7'-6" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	12
	Element	3745	4884	3164	3164	4884	4885		
RXB;6;C.5-C;24-50	D/C Ratio	0.29	0.07	0.35	0.28	0.09	0.28	5'-0" Pool Wall (0.25" on one side for liner plate); 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	12
	Element	4887	4887	4887	3167	4357	4889		
RXB;6;C-B.5;24-50	D/C Ratio	0.29	0.07	0.33	0.28	0.10	0.29	5'-0" Pool Wall (0.25" on one side for liner plate); 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	12
	Element	4892	4892	4891	3172	4362	4890		
RXB;6;B.5-B;24-50	D/C Ratio	0.30	0.11	0.50	0.38	0.24	0.58	7'-6" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	15
	Element	2060	2060	2060	2060	4895	2060		
RXB;6;D-C.5;50-75	D/C Ratio	0.38	0.17	0.33	0.26	0.38	0.42	7'-6" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	15
	Element	7463	8202	6577	6577	8202	8203		
RXB;6;C-5-C;50-75	D/C Ratio	0.32	0.09	0.34	0.20	0.16	0.27	5'-0" Pool Wall (0.25" on one side for liner plate); 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	15
	Element	7151	8205	7467	6026	6580	8205		
RXB;6;C-B.5;50-75	D/C Ratio	0.36	0.11	0.34	0.21	0.07	0.26	5'-0" Pool Wall (0.25" on one side for liner plate); 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	15
	Element	8209	8209	7470	6029	7470	8210		
RXB;6;B.5-B;50-75	D/C Ratio	0.35	0.14	0.31	0.26	0.31	0.50	7'-6" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	15
	Element	7473	8212	6032	8213	6032	8213		
RXB;6;D-C.5;75-100	D/C Ratio	0.33	0.13	0.28	0.19	0.28	0.21	7'-6" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	12
	Element	9362	9362	9362	9362	9955	11678		
RXB;6;C.5-C;75-100	D/C Ratio	0.40	0.08	0.39	0.15	0.04	0.11	5'-0" Pool Wall (0.25" on one side for liner plate); 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	12
	Element	11681	9365	11682	9365	9958	11681		

Table 3B-13: Summary of D/C Ratios for Reactor Building Wall at Grid Line 6 after Averaging Affected Elements (Continued)

Demand/Capacity Ratios									
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	# Elems Checked
RXB;6;C-B.5;75-100	D/C Ratio	0.41	0.08	0.39	0.15	0.04	0.11	5'-0" Pool Wall (0.25" on one side for liner plate); 6 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	12
	Element	11686	9963	11685	9370	9963	11686		
RXB;6;B.5-B;75-100	D/C Ratio	0.33	0.13	0.28	0.19	0.28	0.21	7'-6" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	12
	Element	9373	9373	9373	9373	9966	11689		
RXB;6;D-C.5;100-126	D/C Ratio	0.48	0.09	0.44	0.14	0.20	0.15	7'-6" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	12
	Element	13878	13878	13468	13878	13878	13466		
RXB;6;C.5-C;100-126	D/C Ratio	0.53	0.09	0.58	0.14	0.04	0.15	5'-0" Pool Wall (0.25" on one side for liner plate); 6 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	11
	Element	13469	12986	13470	12986	13881	13469		
RXB;6;C-B.5;100-126	D/C Ratio	0.53	0.09	0.58	0.14	0.04	0.15	5'-0" Pool Wall (0.25" on one side for liner plate); 6 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	11
	Element	13471	12991	13471	12991	13886	13472		
RXB;6;B.5-B;100-126	D/C Ratio	0.48	0.09	0.44	0.15	0.20	0.15	7'-6" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	12
	Element	13889	13889	13473	13889	13889	13475		
RXB;6;E-D;126-145	D/C Ratio	0.61	0.20	0.64	0.22	0.12	0.12	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	2
	Element	15845	15845	15845	15845	15845	15845		
RXB;6;D-C;126-145	D/C Ratio	0.91	0.59	0.40	0.19	0.33	0.14	5'-0" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	24
	Element	15846	15846	15495	15137	15846	14842		
RXB;6;C-B;126-145	D/C Ratio	0.91	0.59	0.39	0.19	0.33	0.13	5'-0" Pool Wall (0.25" on one side for liner plate); 8 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	24
	Element	15857	15857	15506	15148	15857	14851		
RXB;6;B-A;126-145	D/C Ratio	0.61	0.20	0.64	0.22	0.12	0.12	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	2
	Element	15858	15858	15858	15858	15858	15858		
RXB;6;E-D;145-163	D/C Ratio	0.91	0.61	0.60	0.18	0.17	0.06	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	16
	Element	16295	16295	16295	16594	16295	17189		
RXB;6;B-A;145-163	D/C Ratio	0.91	0.61	0.60	0.18	0.17	0.05	4'-0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	16
	Element	16296	16296	16296	16595	16296	17196		

Table 3B-13: Summary of D/C Ratios for Reactor Building Wall at Grid Line 6 after Averaging Affected Elements (Continued)

Demand/Capacity Ratios								
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description
RXB;6;E-D;163-181	D/C Ratio	0.28	0.12	0.35	0.16	0.20	0.11	4' 0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)
	Element	14903	14903	17385	14903	17713	17579	
RXB;6;B-A;163-181	D/C Ratio	0.28	0.12	0.35	0.16	0.20	0.11	4' 0" Interior Wall; 6 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)
	Element	14904	15201	17390	15201	17714	17580	

Note:

The highlighted values of the D/C ratios for the corresponding element shown in this table is based on the averaged demand values using methodology shown in Section 3B.1.1.1. It should be noted that the D/C ratios of all other elements shown in this table will be proportionally reduced if the same averaging methodology is used.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Table 3B-14: Summary of D/C Ratios for Reactor Building Wall at Grid Line E

Demand/Capacity Ratios									
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	# Elems Checked
RXB;E;1-2;24-50	D/C Ratio	0.38	0.10	0.53	0.43	0.57	0.54	5'-0" Exterior Wall Below Grade; 5-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	24
	Element	2642	3257	2599	2599	3924	4526		
RXB;E;2-3;24-50	D/C Ratio	0.33	0.11	0.59	0.51	0.26	0.60	5'-0" Exterior Wall Below Grade; 8-Layers EWEF (#11 @ 12" c/c); 3-Leg-Stirrup (#6 @ 12" c/c)	28
	Element	2666	4005	2659	2654	2666	4559		
RXB;E;3-4;24-50	D/C Ratio	0.51	0.11	0.55	0.35	0.19	0.57	5'-0" Exterior Wall Below Grade; 5-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	44
	Element	2669	2680	2669	2680	3424	2684		
RXB;E;4-5;24-50	D/C Ratio	0.21	0.09	0.26	0.34	0.21	0.61	5'-0" Exterior Wall Below Grade; 5-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	48
	Element	2822	2722	2802	2774	3570	2794		
RXB;E;5-6;24-50	D/C Ratio	0.24	0.08	0.35	0.35	0.20	0.55	5'-0" Exterior Wall Below Grade; 5-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	48
	Element	2940	2952	2940	2940	3586	2840		
RXB;E;6-7;24-50	D/C Ratio	0.23	0.09	0.30	0.35	0.34	0.48	5'-0" Exterior Wall Below Grade; 5-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	20
	Element	2962	2962	4372	4916	4916	2962		
RXB;E;1-2;50-75	D/C Ratio	0.35	0.08	0.65	0.38	0.49	0.28	5'-0" Exterior Wall Below Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	24
	Element	5613	5597	7747	6738	5597	5630		
RXB;E;2-3;50-75	D/C Ratio	0.36	0.10	0.49	0.33	0.30	0.42	5'-0" Exterior Wall Below Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	28
	Element	7787	5662	5670	5670	7785	7789		
RXB;E;3-4;50-75	D/C Ratio	0.31	0.08	0.35	0.26	0.21	0.42	5'-0" Exterior Wall Below Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	44
	Element	5698	5730	6262	5718	7797	7807		
RXB;E;4-5;50-75	D/C Ratio	0.18	0.06	0.24	0.26	0.13	0.44	5'-0" Exterior Wall Below Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	48
	Element	5883	5810	7843	5889	6445	7843		

Table 3B-14: Summary of D/C Ratios for Reactor Building Wall at Grid Line E (Continued)

		Demand/Capacity Ratios						Description	# Elems Checked
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear		
RXB;E;5-6;50-75	D/C Ratio	0.19	0.06	0.30	0.29	0.13	0.43	5'-0" Exterior Wall Below Grade; 4-Layers EWEF (#11 @ 12" c/c); 2 Leg-Stirrup (#6 @ 12" c/c)	48
	Element	5913	5961	6559	6011	6463	7885		
RXB;E;6-7;50-75	D/C Ratio	0.24	0.06	0.43	0.36	0.34	0.39	5'-0" Exterior Wall Below Grade; 4-Layers EWEF (#11 @ 12" c/c); 2 Leg-Stirrup (#6 @ 12" c/c)	20
	Element	7166	6062	7168	6062	6620	7899		
RXB;E;1-2;75-100	D/C Ratio	0.37	0.04	0.78	0.36	0.41	0.26	5'-0" Exterior Wall Below Grade; 4-Layers EWEF (#11 @ 12" c/c); 2 Leg-Stirrup (#6 @ 12" c/c)	24
	Element	11177	9495	9453	8861	8861	8902		
RXB;E;2-3;75-100	D/C Ratio	0.35	0.09	0.41	0.21	0.30	0.41	5'-0" Exterior Wall Below Grade; 4-Layers EWEF (#11 @ 12" c/c); 2 Leg-Stirrup (#6 @ 12" c/c)	28
	Element	8926	8921	10438	8916	8921	8966		
RXB;E;3-4;75-100	D/C Ratio	0.27	0.09	0.32	0.17	0.21	0.47	5'-0" Exterior Wall Below Grade; 4-Layers EWEF (#11 @ 12" c/c); 2 Leg-Stirrup (#6 @ 12" c/c)	44
	Element	11267	11267	10486	9072	11241	9072		
RXB;E;4-5;75-100	D/C Ratio	0.28	0.09	0.33	0.17	0.16	0.46	5'-0" Exterior Wall Below Grade; 4-Layers EWEF (#11 @ 12" c/c); 2 Leg-Stirrup (#6 @ 12" c/c)	48
	Element	11269	11269	10576	9210	10560	9094		
RXB;E;5-6;75-100	D/C Ratio	0.21	0.05	0.37	0.23	0.13	0.41	5'-0" Exterior Wall Below Grade; 4-Layers EWEF (#11 @ 12" c/c); 2 Leg-Stirrup (#6 @ 12" c/c)	48
	Element	10654	11301	10728	9350	10652	9234		
RXB;E;6-7;75-100	D/C Ratio	0.23	0.04	0.48	0.32	0.28	0.33	5'-0" Exterior Wall Below Grade; 4-Layers EWEF (#11 @ 12" c/c); 2 Leg-Stirrup (#6 @ 12" c/c)	20
	Element	9386	9406	10748	9406	9406	9378		
RXB;E;1-2;100-126	D/C Ratio	0.31	0.03	0.70	0.19	0.20	0.26	5'-0" Exterior Wall Above Grade; 4-Layers EWEF (#11 @ 12" c/c); 2 Leg-Stirrup (#6 @ 12" c/c)	24
	Element	12333	13584	12333	12333	12333	13584		
RXB;E;2-3;100-126	D/C Ratio	0.30	0.06	0.40	0.15	0.24	0.39	5'-0" Exterior Wall Above Grade; 4-Layers EWEF (#11 @ 12" c/c); 2 Leg-Stirrup (#6 @ 12" c/c)	26
	Element	13596	13623	12375	12375	13173	12395		
RXB;E;3-4;100-126	D/C Ratio	0.47	0.12	0.31	0.08	0.20	0.43	5'-0" Exterior Wall Above Grade; 4-Layers EWEF (#11 @ 12" c/c); 2 Leg-Stirrup (#6 @ 12" c/c)	44
	Element	13660	13660	12415	12819	12399	13269		

Table 3B-14: Summary of D/C Ratios for Reactor Building Wall at Grid Line E (Continued)

		Demand/Capacity Ratios						Description	# Elems Checked
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear		
RXB;E;4-5;100-126	D/C Ratio	0.36	0.08	0.25	0.09	0.13	0.34	5'-0" Exterior Wall Above Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	48
	Element	13283	13695	13771	12527	13777	13695		
RXB;E;5-6;100-126	D/C Ratio	0.25	0.05	0.33	0.15	0.14	0.25	5'-0" Exterior Wall Above Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	48
	Element	13797	13791	12599	12599	13791	12539		
RXB;E;6-7;100-126	D/C Ratio	0.19	0.01	0.46	0.18	0.18	0.16	5'-0" Exterior Wall Above Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	20
	Element	13025	13891	13025	12655	13488	13025		
RXB;E;1-2;126-145	D/C Ratio	0.26	0.05	0.42	0.12	0.35	0.38	5'-0" Exterior Wall Above Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	24
	Element	15613	15613	14631	14631	15613	15608		
RXB;E;2-3;126-145	D/C Ratio	0.39	0.10	0.23	0.07	0.21	0.37	5'-0" Exterior Wall Above Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	28
	Element	15651	15651	14661	14661	14669	14685		
RXB;E;3-4;126-145	D/C Ratio	0.47	0.13	0.27	0.06	0.26	0.69	5'-0" Exterior Wall Above Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	44
	Element	15348	15348	15697	15697	15697	15360		
RXB;E;4-5;126-145	D/C Ratio	0.42	0.11	0.31	0.07	0.20	0.65	5'-0" Exterior Wall Above Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	48
	Element	15703	15366	15766	15766	15766	14791		
RXB;E;5-6;126-145	D/C Ratio	0.44	0.09	0.38	0.11	0.22	0.65	5'-0" Exterior Wall Above Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	48
	Element	15779	15779	15779	15841	15779	14795		
RXB;E;6-7;126-145	D/C Ratio	0.13	0.03	0.35	0.13	0.13	0.20	5'-0" Exterior Wall Above Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	20
	Element	15859	15859	14859	14859	14859	14853		
RXB;E;1-2;145-163	D/C Ratio	0.34	0.09	0.21	0.06	0.31	0.27	5'-0" Exterior Wall Above Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	24
	Element	16985	16985	16065	16065	16088	16387		
RXB;E;2-3;145-163	D/C Ratio	0.60	0.16	0.25	0.04	0.21	0.46	5'-0" Exterior Wall Above Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	28
	Element	17021	17021	16124	16100	16124	16423		

Table 3B-14: Summary of D/C Ratios for Reactor Building Wall at Grid Line E (Continued)

		Demand/Capacity Ratios						Description	# Elems Checked
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear		
RXB;E;3-4;145-163	D/C Ratio	0.59	0.16	0.29	0.04	0.36	0.57	5'-0" Exterior Wall Above Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	44
	Element	17033	17049	16176	16176	16176	16475		
RXB;E;4-5;145-163	D/C Ratio	0.54	0.15	0.32	0.04	0.32	0.56	5'-0" Exterior Wall Above Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	48
	Element	17105	17101	16232	16188	16188	16531		
RXB;E;5-6;145-163	D/C Ratio	0.54	0.12	0.43	0.09	0.31	0.54	5'-0" Exterior Wall Above Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	48
	Element	16543	17153	16244	16288	16244	16543		
RXB;E;6-7;145-163	D/C Ratio	0.29	0.04	0.36	0.10	0.18	0.19	5'-0" Exterior Wall Above Grade; 4-Layers EWEF (#11 @ 12" c/c); 2-Leg-Stirrup (#6 @ 12" c/c)	20
	Element	16898	17205	16300	16300	17197	16599		

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17, RAI 03.08.04-34

Table 3B-15: Summary of D/C Ratios for Reactor Building Slab at EL. 100'-0"

Demand/Capacity Ratios									
Section		East-West Reinf.	E-W Comp. Stress	North-South Reinf.	N-S Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	# Elems Checked
RXB;100;1-2;D-E.a	D/C Ratio	0.49	0.08	0.53	0.34	1.30	0.90	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	17
	Element	11738	11758	11760	11782	11738	11704		
RXB;100;2-3;D-E.a	D/C Ratio	0.47	0.12	0.68	0.22	0.23	0.46	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	31
	Element	11810	11818	11804	11804	11810	11857		
RXB;100;3-4;D-E.a	D/C Ratio	0.37	0.07	0.87	0.27	0.25	0.81	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	55
	Element	11960	11966	11970	11970	11937	11966		
RXB;100;4-5;D-E.a	D/C Ratio	0.18	0.06	0.67	0.25	0.28	0.79	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	60
	Element	11990	11976	11980	11980	11978	11976		
RXB;100;5-6;D-E.a	D/C Ratio	0.18	0.07	0.51	0.19	0.16	0.52	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	60
	Element	12200	12210	12100	12100	12209	12210		
RXB;100;6-7;D-E.a	D/C Ratio	0.18	0.11	0.25	0.16	0.19	0.46	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	18
	Element	12280	12220	12242	12220	12296	12220		
RXB;100;1-2;C-D.a	D/C Ratio	0.62	0.15	0.64	0.35	0.24	0.44	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	36
	Element	11788	11788	11783	11783	11788	11690		
RXB;100;6-7;C-D.a	D/C Ratio	0.18	0.10	0.17	0.09	0.19	0.22	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	30
	Element	12301	12221	12243	12221	12222	12224		
RXB;100;1-2;B-C.a	D/C Ratio	0.61	0.15	0.66	0.35	0.27	0.94	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	36
	Element	11789	11789	11794	11794	11696	11697		
RXB;100;6-7;B-C.a	D/C Ratio	0.17	0.10	0.17	0.09	0.19	0.23	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	30
	Element	12254	12232	12254	12232	12231	12229		
RXB;100;1-2;A-B.a	D/C Ratio	0.40	0.12	0.44	0.30	1.06	0.42	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	21
	Element	11755	11755	11717	11795	11755	11775		
RXB;100;2-3;A-B.a	D/C Ratio	0.36	0.06	0.52	0.18	0.20	0.45	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	35
	Element	11805	11807	11805	11805	11864	11864		
RXB;100;3-4;A-B.a	D/C Ratio	0.35	0.07	0.87	0.27	0.25	0.82	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	55
	Element	11961	11975	11971	11971	11944	11975		
RXB;100;4-5;A-B.a	D/C Ratio	0.18	0.07	0.67	0.25	0.27	0.80	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	60
	Element	11991	11985	11981	11981	11983	11985		
RXB;100;5-6;A-B.a	D/C Ratio	0.19	0.08	0.51	0.19	0.16	0.53	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	60
	Element	12201	12211	12101	12101	12212	12211		

Table 3B-15: Summary of D/C Ratios for Reactor Building Slab at EL. 100'-0" (Continued)

Demand/Capacity Ratios								
Section		East-West Reinf.	E-W Comp. Stress	North-South Reinf.	N-S Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description
RXB;100;6-7;A-B.a	D/C Ratio	0.18	0.11	0.26	0.17	0.19	0.47	3'-0" Floor Slab; 3 Layers EWEF (#11 @
	Element	12295	12233	12233	12233	12311	12233	12" c/c); 2-Leg Stirrups (#6 @ 12" c/c)

Note:
Highlighted items indicate those design check zones that exceed a D/C ratio of 0.8.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17, RAI 03.08.04-34

Table 3B-17: Summary of D/C Ratios for Reactor Building Slab at EL. 100'-0" After Averaging Affected Elements

Demand/Capacity Ratios									
Section		East-West Reinf.	E-W Comp. Stress	North-South Reinf.	N-S Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	# Elems Checked
RXB;100;1-2;D-E.a	D/C Ratio	0.49	0.08	0.53	0.34	0.73	0.90	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	17
	Element	11738	11758	11760	11782	11738	11704		
RXB;100;2-3;D-E.a	D/C Ratio	0.47	0.12	0.68	0.22	0.23	0.46	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	31
	Element	11810	11818	11804	11804	11810	11857		
RXB;100;3-4;D-E.a	D/C Ratio	0.37	0.07	0.87	0.27	0.25	0.81	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	55
	Element	11960	11966	11970	11970	11937	11966		
RXB;100;4-5;D-E.a	D/C Ratio	0.18	0.06	0.67	0.25	0.28	0.79	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	60
	Element	11990	11976	11980	11980	11978	11976		
RXB;100;5-6;D-E.a	D/C Ratio	0.18	0.07	0.51	0.19	0.16	0.52	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	60
	Element	12200	12210	12100	12100	12209	12210		
RXB;100;6-7;D-E.a	D/C Ratio	0.18	0.11	0.25	0.16	0.19	0.46	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	18
	Element	12280	12220	12242	12220	12296	12220		
RXB;100;1-2;C-D.a	D/C Ratio	0.62	0.15	0.64	0.35	0.24	0.44	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	36
	Element	11788	11788	11783	11783	11788	11690		
RXB;100;6-7;C-D.a	D/C Ratio	0.18	0.10	0.17	0.09	0.19	0.22	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	30
	Element	12301	12221	12243	12221	12222	12224		
RXB;100;1-2;B-C.a	D/C Ratio	0.61	0.15	0.66	0.35	0.27	0.94	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	36
	Element	11789	11789	11794	11794	11696	11697		
RXB;100;6-7;B-C.a	D/C Ratio	0.17	0.10	0.17	0.09	0.19	0.23	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	30
	Element	12254	12232	12254	12232	12231	12229		
RXB;100;1-2;A-B.a	D/C Ratio	0.40	0.12	0.44	0.30	0.73	0.42	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	21
	Element	11755	11755	11717	11795	11755	11775		
RXB;100;2-3;A-B.a	D/C Ratio	0.36	0.06	0.52	0.18	0.20	0.45	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	35
	Element	11805	11807	11805	11805	11864	11864		
RXB;100;3-4;A-B.a	D/C Ratio	0.35	0.07	0.87	0.27	0.25	0.82	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	55
	Element	11961	11975	11971	11971	11944	11975		
RXB;100;4-5;A-B.a	D/C Ratio	0.18	0.07	0.67	0.25	0.27	0.80	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	60
	Element	11991	11985	11981	11981	11983	11985		
RXB;100;5-6;A-B.a	D/C Ratio	0.19	0.08	0.51	0.19	0.16	0.53	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrups (#6 @ 12" c/c)	60
	Element	12201	12211	12101	12101	12212	12211		

Table 3B-17: Summary of D/C Ratios for Reactor Building Slab at EL. 100'-0" After Averaging Affected Elements

Demand/Capacity Ratios								
Section		East-West Reinf.	E-W Comp. Stress	North-South Reinf.	N-S Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description
RXB;100;6-7;A-B.a	D/C Ratio	0.18	0.11	0.26	0.17	0.19	0.47	3'-0" Floor Slab; 3 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrups (#6 @ 12" c/c)
	Element	12295	12233	12233	12233	12311	12233	

Note:
The highlighted values of the D/C ratios for the corresponding element shown in this table is based on the averaged demand values using methodology shown in Section 3B.1.1.1. It should be noted that the D/C ratios of all other elements shown in this table will be proportionally reduced if the same averaging methodology is used.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Table 3B-18: Summary of D/C Ratios for RXB Roof Slab

Demand/Capacity Ratios									
Section		East-West Reinf.	E-W Comp. Stress	North-South Reinf.	N-S Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	# Elems Checked
RXB;181;1-2;D.3-E	D/C Ratio	0.26	0.12	0.26	0.04	0.11	0.24	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	24
	Element	17275	17275	17967	17275	17583	17967		
RXB;181;2-3;D.3-E	D/C Ratio	0.42	0.21	0.34	0.07	0.18	0.42	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	28
	Element	17295	17295	17981	17295	17755	17981		
RXB;181;3-4;D.3-E	D/C Ratio	0.37	0.21	0.34	0.08	0.29	0.51	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	44
	Element	17305	17309	17983	17303	17777	18003		
RXB;181;4-5;D.3-E	D/C Ratio	0.39	0.20	0.41	0.07	0.26	0.49	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	48
	Element	17653	17339	18027	17331	17779	18005		
RXB;181;5-6;D.3-E	D/C Ratio	0.38	0.16	0.42	0.08	0.23	0.48	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	48
	Element	17677	17367	18049	17677	17803	18029		
RXB;181;6-7;D.3-E	D/C Ratio	0.19	0.07	0.27	0.07	0.22	0.29	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	20
	Element	18053	18053	18053	17679	17391	17391		
RXB;181;1-2;C-D.3	D/C Ratio	0.63	0.08	0.49	0.04	0.36	0.27	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	42
	Element	18083	18147	18147	18083	18083	18147		
RXB;181;2-3;C-D.3	D/C Ratio	0.43	0.12	0.54	0.05	0.09	0.44	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	49
	Element	18161	18245	18245	18245	18167	18245		
RXB;181;3-4;C-D.3	D/C Ratio	0.36	0.13	0.54	0.05	0.07	0.48	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	77
	Element	18259	18399	18259	18259	18399	18399		
RXB;181;4-5;C-D.3	D/C Ratio	0.37	0.13	0.61	0.05	0.08	0.48	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	84
	Element	18567	18413	18567	18413	18567	18567		
RXB;181;5-6;C-D.3	D/C Ratio	0.43	0.10	0.59	0.06	0.10	0.48	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	84
	Element	18735	18581	18735	18735	18735	18581		
RXB;181;6-7;C-D.3	D/C Ratio	0.50	0.07	0.49	0.06	0.34	0.29	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	35
	Element	18811	18749	18749	18749	18811	18749		
RXB;181;1-2;A.7-C	D/C Ratio	0.63	0.08	0.49	0.04	0.36	0.27	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	42
	Element	18084	18160	18160	18084	18084	18160		
RXB;181;2-3;A.7-C	D/C Ratio	0.43	0.12	0.54	0.05	0.09	0.45	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	49
	Element	18174	18258	18258	18258	18168	18258		
RXB;181;3-4;A.7-C	D/C Ratio	0.36	0.13	0.54	0.05	0.07	0.47	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2 Leg Stirrup (#6 @ 12" c/c)	77
	Element	18272	18412	18272	18272	18412	18412		

Table 3B-18: Summary of D/C Ratios for RXB Roof Slab (Continued)

		Demand/Capacity Ratios						Description	# Elems Checked
Section		East-West Reinf.	E-W Comp. Stress	North-South Reinf.	N-S Comp. Stress	XZ-Plane Shear	YZ-Plane Shear		
RXB;181;4-5;A.7-C	D/C Ratio	0.37	0.13	0.60	0.04	0.07	0.48	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	84
	Element	18580	18426	18580	18426	18580	18580		
RXB;181;5-6;A.7-C	D/C Ratio	0.43	0.11	0.59	0.06	0.10	0.47	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	84
	Element	18748	18594	18748	18748	18748	18594		
RXB;181;6-7;A.7-C	D/C Ratio	0.50	0.08	0.49	0.06	0.34	0.29	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	35
	Element	18812	18762	18762	18762	18812	18762		
RXB;181;1-2;A-A.7	D/C Ratio	0.28	0.13	0.28	0.05	0.10	0.24	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	24
	Element	17276	17276	17968	17276	17584	17968		
RXB;181;2-3;A-A.7	D/C Ratio	0.42	0.20	0.34	0.08	0.18	0.42	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	28
	Element	17296	17296	17982	17296	17756	17982		
RXB;181;3-4;A-A.7	D/C Ratio	0.38	0.21	0.35	0.08	0.29	0.51	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	44
	Element	17306	17312	17984	17304	17778	18004		
RXB;181;4-5;A-A.7	D/C Ratio	0.39	0.20	0.41	0.06	0.26	0.49	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	48
	Element	17654	17340	18028	17332	17780	18006		
RXB;181;5-6;A-A.7	D/C Ratio	0.38	0.16	0.42	0.08	0.23	0.48	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	48
	Element	17678	17368	18050	17678	17804	18030		
RXB;181;6-7;A-A.7	D/C Ratio	0.18	0.07	0.27	0.07	0.22	0.30	4'-0" Roof Slab; 5 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	20
	Element	18054	18054	18054	17680	17392	17392		

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Table 3B-19: Summary of D/C Ratios for Reactor Building Pilasters on Grid Line A Wall

		Demand/Capacity Ratios					# Elems Checked
Section		Moment Axis 2	Shear Axis 3	Compression	Tension	Description	
RXB;PI;A2;24-50	D/C Ratio	0.66	0.70	0.20	0.13	10'-x-5' Pilaster; 3 Rows 8 (Bundled) #11 @ 12" c/c; #6-Ties Wraps @ 12" c/c; 5000 psi concrete	4
	Element	879	2030	1320	2030		
RXB;PI;A2;50-75	D/C Ratio	0.38	0.31	0.18	0.15	10'-x-5' Pilaster; 2 Rows 8 (Bundled) #11 @ 12" c/c; #6-Ties Wraps @ 12" c/c; 5000 psi concrete	4
	Element	3060	2348	2348	2348		
RXB;PI;A2;75-100	D/C Ratio	0.62	0.28	0.14	0.13	10'-x-5' Pilaster; 2 Rows 8 (Bundled) #11 @ 12" c/c; #6-Ties Wraps @ 12" c/c; 5000 psi concrete	4
	Element	5147	3803	3803	5147		
RXB;PI;A2;100-126	D/C Ratio	0.60	0.42	0.08	0.16	10'-x-5' Pilaster; 2 Rows 8 (Bundled) #11 @ 12" c/c; #6-Ties Wraps @ 12" c/c; 7000 psi concrete	4
	Element	5342	5431	5342	5342		
RXB;PI;A2;126-163	D/C Ratio	0.61	0.45	0.06	0.11	10'-x-5' Pilaster; 3 Rows 8 (Bundled) #11 @ 12" c/c; #6-Ties Wraps @ 12" c/c; 7000 psi concrete	8
	Element	6106	6258	5668	5872		
RXB;PI;A3;24-50	D/C Ratio	0.66	0.63	0.19	0.08	10'-x-5' Pilaster; 3 Rows 8 (Bundled) #11 @ 12" c/c; #6-Ties Wraps @ 12" c/c; 5000 psi concrete	4
	Element	897	2036	897	2036		
RXB;PI;A3;50-75	D/C Ratio	0.44	0.31	0.17	0.09	10'-x-5' Pilaster; 2 Rows 8 (Bundled) #11 @ 12" c/c; #6-Ties Wraps @ 12" c/c; 5000 psi concrete	4
	Element	3440	2378	2378	2641		
RXB;PI;A3;75-100	D/C Ratio	0.73	0.40	0.10	0.04	10'-x-5' Pilaster; 3 Rows 8 (Bundled) #11 @ 12" c/c; #6-Ties Wraps @ 12" c/c; 5000 psi concrete	4
	Element	5151	3833	3833	3833		
RXB;PI;A3;100-126	D/C Ratio	0.45	0.71	0.05	0.02	10'-x-5' Pilaster; 6 Row 8 (Bundled) #11 @ 12" c/c; #6-Ties Wraps @ 12" c/c; 7000 psi concrete	4
	Element	5344	5433	5433	5628		
RXB;PI;A3;126-163	D/C Ratio	0.68	0.53	0.05	0.03	10'-x-5' Pilaster; 6 Row 8 (Bundled) #11 @ 12" c/c; #6-Ties Wraps @ 6" c/c; 7000 psi concrete	8
	Element	5874	6260	5874	5874		
RXB;PI;A4;24-50	D/C Ratio	0.42	0.47	0.17	0.00	10'-x-5' Pilaster; 2 Rows 8 (Bundled) #11 @ 12" c/c; #6-Ties Wraps @ 12" c/c; 5000 psi concrete	4
	Element	935	935	935	2039		
RXB;PI;A4;50-75	D/C Ratio	0.39	0.26	0.13	0.02	10'-x-5' Pilaster; 2 Rows 8 (Bundled) #11 @ 12" c/c; #6-Ties Wraps @ 12" c/c; 5000 psi concrete	4
	Element	2679	3442	2418	3442		
RXB;PI;A4;75-100	D/C Ratio	0.58	0.49	0.09	0.02	10'-x-5' Pilaster; 3 Rows 8 (Bundled) #11 @ 12" c/c; #6-Ties Wraps @ 12" c/c; 5000 psi concrete	4
	Element	4719	3911	3911	5159		
RXB;PI;A4;100-126	D/C Ratio	0.63	0.58	0.05	0.03	10'-x-5' Pilaster; 3 Rows 8 (Bundled) #11 @ 12" c/c; #6-Ties Wraps @ 12" c/c; 7000 psi concrete	4
	Element	5366	5630	5366	5630		
RXB;PI;A4;126-163	D/C Ratio	0.71	0.63	0.06	0.05	10'-x-5' Pilaster; 6 Row 8 (Bundled) #11 @ 12" c/c; #6-Ties Wraps @ 6" c/c; 7000 psi concrete	8
	Element	6110	5876	5876	5876		

Table 3B-19: Summary of D/C Ratios for Reactor Building Pilasters on Grid Line A Wall (Continued)

Section		Demand/Capacity Ratios				Description	# Elems Checked
		Moment Axis 2	Shear Axis 3	Compression	Tension		
RXB;PI;A5;24-50	D/C Ratio	0.44	0.44	0.17	0.01	10' x 5' Pilaster; 2 Rows 8 (Bundled) #11 @ 12" c/c; #6 Ties Wraps @ 12" c/c; 5000 psi concrete	4
	Element	1009	1009	1009	2085		
RXB;PI;A5;50-75	D/C Ratio	0.63	0.31	0.14	0.05	10' x 5' Pilaster; 1 Row 8 (Bundled) #11 @ 12" c/c; #6 Ties Wraps @ 12" c/c; 5000 psi concrete	4
	Element	2733	3458	2476	3458		
RXB;PI;A5;75-100	D/C Ratio	0.65	0.42	0.09	0.03	10' x 5' Pilaster; 2 Rows 8 (Bundled) #11 @ 12" c/c; #6 Ties Wraps @ 12" c/c; 5000 psi concrete	4
	Element	5169	3993	3993	5169		
RXB;PI;A5;100-126	D/C Ratio	0.53	0.36	0.06	0.05	10' x 5' Pilaster; 3 Rows 8 (Bundled) #11 @ 12" c/c; #6 Ties Wraps @ 12" c/c; 7000 psi concrete	4
	Element	5368	5441	5632	5632		
RXB;PI;A5;126-163	D/C Ratio	0.72	0.68	0.07	0.07	10' x 5' Pilaster; 6 Row 8 (Bundled) #11 @ 12" c/c; #6 Ties Wraps @ 6" c/c; 7000 psi concrete	8
	Element	6112	5782	5878	5878		
RXB;PI;A6;24-50	D/C Ratio	0.36	0.44	0.18	0.07	10' x 5' Pilaster; 2 Rows 8 (Bundled) #11 @ 12" c/c; #6 Ties Wraps @ 12" c/c; 5000 psi concrete	4
	Element	1500	1087	1087	2144		
RXB;PI;A6;50-75	D/C Ratio	0.51	0.31	0.17	0.14	10' x 5' Pilaster; 1 Row 8 (Bundled) #11 @ 12" c/c; #6 Ties Wraps @ 12" c/c; 5000 psi concrete	4
	Element	2797	3478	2544	3478		
RXB;PI;A6;75-100	D/C Ratio	0.52	0.27	0.14	0.17	10' x 5' Pilaster; 1 Row 8 (Bundled) #11 @ 12" c/c; #6 Ties Wraps @ 12" c/c; 5000 psi concrete	4
	Element	4883	4077	4077	4883		
RXB;PI;A6;100-126	D/C Ratio	0.51	0.18	0.11	0.26	10' x 5' Pilaster; 1 Row 8 (Bundled) #11 @ 12" c/c; #6 Ties Wraps @ 12" c/c; 7000 psi concrete	4
	Element	5385	5385	5385	5385		
RXB;PI;A6;126-163	D/C Ratio	0.55	0.33	0.10	0.26	10' x 5' Pilaster; 2 Rows 8 (Bundled) #11 @ 12" c/c; #6 Ties Wraps @ 12" c/c; 7000 psi concrete	8
	Element	5880	5784	5880	5880		

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Table 3B-20: Summary of D/C Ratios for Reactor Building Beams on EL. 75'-0" Slab

Demand/Capacity Ratios							
Section		Moment Axis 3	Shear Axis 2	Compression	Tension	Description	# Elems Checked
RXB;TB;75;A-B;2-2	D/C Ratio	0.36	0.23	0.21	0.14	5' X 2' T Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3658	3657	3654	3654		
RXB;TB;75;A-B;2-3	D/C Ratio	0.20	0.10	0.06	0.06	5' X 2' T Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3664	3668	3668	3668		
RXB;TB;75;A-B;3-3	D/C Ratio	0.33	0.30	0.08	0.12	5' X 2' T Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3678	3674	3678	3678		
RXB;TB;75;A-B;3-4	D/C Ratio	0.39	0.51	0.05	0.06	5' X 2' T Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3684	3684	3688	3688		
RXB;TB;75;A-B;4-4	D/C Ratio	0.35	0.58	0.14	0.13	5' X 2' T Beam Section; 3 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3694	3694	3694	3698		
RXB;TB;75;A-B;4-5(1)	D/C Ratio	0.45	0.48	0.11	0.07	5' X 2' T Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3704	3704	3704	3708		
RXB;TB;75;A-B;4-5(2)	D/C Ratio	0.48	0.52	0.09	0.08	5' X 2' T Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3714	3714	3714	3718		
RXB;TB;75;A-B;5-5	D/C Ratio	0.46	0.51	0.11	0.16	5' X 2' T Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3724	3724	3728	3728		
RXB;TB;75;A-B;5-6(1)	D/C Ratio	0.39	0.44	0.09	0.08	5' X 2' T Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3734	3734	3734	3736		
RXB;TB;75;A-B;5-6(2)	D/C Ratio	0.40	0.48	0.08	0.06	5' X 2' T Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3744	3744	3744	3748		
RXB;TB;75;A-B;6-6	D/C Ratio	0.38	0.58	0.18	0.21	5' X 2' T Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3754	3754	3754	3754		
RXB;TB;75;6-7;B-C	D/C Ratio	0.38	0.22	0.07	0.06	5' X 2' T Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3773	3773	3767	3767		
RXB;TB;75;6-7;C-C	D/C Ratio	0.50	0.26	0.06	0.04	5' X 2' T Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3772	3772	3772	3760		
RXB;TB;75;6-7;C-D	D/C Ratio	0.41	0.22	0.07	0.05	5' X 2' T Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3771	3771	3765	3765		
RXB;TB;75;D-E;2-2	D/C Ratio	0.26	0.14	0.20	0.11	5' X 2' T Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3653	3653	3653	3653		

Table 3B-20: Summary of D/C Ratios for Reactor Building Beams on EL. 75'-0" Slab (Continued)

Section		Demand/Capacity Ratios				Description	# Elems Checked
		Moment Axis 3	Shear Axis 2	Compression	Tension		
RXB;TB;75;D-E;2-3	D/C Ratio	0.29	0.18	0.16	0.16	5' X 2' T-Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3663	3659	3660	3659		
RXB;TB;75;D-E;3-3	D/C Ratio	0.70	0.55	0.10	0.18	5' X 2' T-Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3673	3673	3669	3669		
RXB;TB;75;D-E;3-4	D/C Ratio	0.41	0.54	0.06	0.07	5' X 2' T-Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3683	3683	3679	3679		
RXB;TB;75;D-E;4-4	D/C Ratio	0.37	0.59	0.14	0.13	5' X 2' T-Beam Section; 3 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3693	3693	3693	3689		
RXB;TB;75;D-E;4-5(1)	D/C Ratio	0.46	0.48	0.11	0.07	5' X 2' T-Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3703	3703	3703	3699		
RXB;TB;75;D-E;4-5(2)	D/C Ratio	0.48	0.53	0.09	0.10	5' X 2' T-Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3713	3713	3713	3711		
RXB;TB;75;D-E;5-5	D/C Ratio	0.46	0.51	0.11	0.16	5' X 2' T-Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3723	3723	3719	3719		
RXB;TB;75;D-E;5-6(1)	D/C Ratio	0.38	0.44	0.08	0.08	5' X 2' T-Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3733	3733	3733	3731		
RXB;TB;75;D-E;5-6(2)	D/C Ratio	0.40	0.48	0.08	0.06	5' X 2' T-Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3743	3743	3743	3739		
RXB;TB;75;D-E;6-6	D/C Ratio	0.28	0.59	0.18	0.21	5' X 2' T-Beam Section; 3 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	5
	Element	3753	3753	3753	3753		
RXB;TB;75;1-2;B-C	D/C Ratio	0.16	0.10	0.04	0.05	5' X 2' T-Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	6
	Element	3633	3633	3648	3648		
RXB;TB;75;1-2;C-C	D/C Ratio	0.22	0.18	0.09	0.15	5' X 2' T-Beam Section; 3 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	6
	Element	3647	3647	3647	3647		
RXB;TB;75;1-2;C-D	D/C Ratio	0.19	0.09	0.03	0.05	5' X 2' T-Beam Section; 2 rows of 6 #11 bars; Double-leg Stirrup (#6 @ 12" c/c)	6
	Element	3646	3646	3643	3646		

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Table 3B-21: Summary of D/C Ratios for Reactor Building Buttress at Grid Line 1 on EL. 126'-0" Slab

Demand/Capacity Ratios							
Section		Moment Axis 2	Shear Axis 3	Compression	Tension	Description	# Elems Checked
RXB;B;1;126;B-A	D/C Ratio	0.35	0.17	0.08	0.30	10' x 5' Buttress; 8 (Bundled) #11 @ 12" c/c; #6 Ties- Wraps @ 12" c/c	5
	Element	5657	5658	5657	5657		
RXB;B;1;126;C-B	D/C Ratio	0.43	0.24	0.16	0.58	10' x 5' Buttress; 8 (Bundled) #11 @ 12" c/c; #6 Ties- Wraps @ 12" c/c	6
	Element	5656	5655	5652	5652		
RXB;B;1;126;D-C	D/C Ratio	0.43	0.18	0.10	0.36	10' x 5' Buttress; 8 (Bundled) #11 @ 12" c/c; #6 Ties- Wraps @ 12" c/c	6
	Element	5645	5646	5650	5650		
RXB;B;1;126;E-D	D/C Ratio	0.38	0.25	0.01	0.06	10' x 5' Buttress; 8 (Bundled) #11 @ 12" c/c; #6 Ties- Wraps @ 12" c/c	5
	Element	5644	5644	5640	5640		

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Table 3B-22: Summary of D/C Ratios for West Wing Wall at Grid Line 4

Demand/Capacity Ratios									
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	# Elems Checked
RXB;4;D-C;24-50	D/C Ratio	0.40	0.19	0.68	0.76	0.24	0.83	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	16
	Element	4638	4638	3071	3071	4638	3071		
RXB;4;C-B;24-50	D/C Ratio	0.38	0.17	0.67	0.74	0.25	0.82	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	16
	Element	4645	4645	3072	3072	4645	3072		
RXB;4;D-C;50-75	D/C Ratio	0.38	0.22	0.62	0.42	0.46	0.39	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	20
	Element	8070	8070	8073	5781	7300	7300		
RXB;4;C-B;50-75	D/C Ratio	0.40	0.22	0.62	0.42	0.50	0.42	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	20
	Element	8077	8077	8074	5782	7307	7307		
RXB;4;D-C;75-100	D/C Ratio	0.32	0.18	0.61	0.40	0.39	0.41	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	16
	Element	11582	9082	9678	9678	11582	11585		
RXB;4;C-B;75-100	D/C Ratio	0.33	0.18	0.61	0.41	0.41	0.44	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	16
	Element	11589	9089	9679	9679	11589	11586		
RXB;4;D-C;100-126	D/C Ratio	0.95	0.35	0.48	0.29	0.38	0.28	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	16
	Element	13686	13686	13686	12459	12456	12459		
RXB;4;C-B;100-126	D/C Ratio	0.96	0.36	0.48	0.30	0.40	0.30	5'-0" Interior Wall; 3 Row 3 (Bundled) #11 @ 12" c/c; 2#8 Headed Bars @ 24" c/c	16
	Element	13693	13693	13693	12460	12463	12460		

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17, RAI 03.08.04-34

Table 3B-23: Summary of D/C Ratios for Reactor Building Pool Wall at Grid Line B

Demand/Capacity Ratios									
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	Elms Checked
RXB;B;1-2;24-50	D/C Ratio	0.35	0.18	0.43	0.40	0.18	0.28	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	20
	Element	3971	3971	2613	2634	4528	4528		
RXB;B;2-3;24-50	D/C Ratio	0.40	0.12	0.65	0.34	0.28	0.54	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	28
	Element	3016	4545	3016	3016	4545	4578		
RXB;B;3-4;24-50	D/C Ratio	0.57	0.07	0.55	0.22	0.97	0.58	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	44
	Element	4596	3046	4046	3057	4584	4596		
RXB;B;4-5;24-50	D/C Ratio	0.32	0.06	0.41	0.19	0.28	0.46	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	48
	Element	4116	3077	3077	4650	4650	4650		
RXB;B;5-6;24-50	D/C Ratio	0.37	0.12	0.63	0.37	0.33	0.35	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	48
	Element	3161	4878	3163	3163	4878	4878		
RXB;B;1-2;50-75	D/C Ratio	0.34	0.16	0.50	0.31	0.47	0.20	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	21
	Element	6774	6770	6130	5621	6774	6130		
RXB;B;2-3;50-75	D/C Ratio	0.41	0.12	0.52	0.25	0.40	0.54	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	35
	Element	5651	8010	5651	5651	8010	5651		
RXB;B;3-4;50-75	D/C Ratio	0.60	0.10	0.39	0.28	0.59	0.42	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	55
	Element	7294	8068	5770	5701	5701	8068		
RXB;B;4-5;50-75	D/C Ratio	0.54	0.10	0.43	0.21	0.45	0.96	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	60
	Element	7314	7314	5892	8080	7314	8084		
RXB;B;5-6;50-75	D/C Ratio	0.46	0.13	0.67	0.32	0.42	0.65	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	60
	Element	7457	6014	6014	6014	6014	6014		
RXB;B;1-2;75-100	D/C Ratio	0.41	0.11	0.37	0.23	0.34	0.32	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	20
	Element	11377	10434	10788	8894	11377	11377		

Tier 2

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Table 3B-23: Summary of D/C Ratios for Reactor Building Pool Wall at Grid Line B (Continued)

		Demand/Capacity Ratios						Description	Elems Checked
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear		
RXB;B;2-3;75-100	D/C Ratio	0.54	0.09	0.55	0.20	0.39	0.38	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	28
	Element	11536	8919	11536	8919	11536	8919		
RXB;B;3-4;75-100	D/C Ratio	0.46	0.08	0.35	0.22	0.55	0.44	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	44
	Element	9075	9075	9075	9075	9075	9075		
RXB;B;4-5;75-100	D/C Ratio	0.35	0.06	0.35	0.23	0.43	0.41	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	48
	Element	10858	9121	9214	9214	11591	9096		
RXB;B;5-6;75-100	D/C Ratio	0.44	0.13	0.59	0.26	0.39	0.54	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	48
	Element	9947	9354	9354	9354	9354	9354		
RXB;B;1-2;100-126	D/C Ratio	0.43	0.10	0.45	0.23	0.27	0.49	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	20
	Element	13171	13171	13554	13554	12337	13554		
RXB;B;2-3;100-126	D/C Ratio	0.32	0.09	0.58	0.28	0.27	0.36	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	28
	Element	12371	13176	12371	12371	12371	12371		
RXB;B;3-4;100-126	D/C Ratio	0.49	0.06	0.52	0.19	0.77	0.54	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	44
	Element	13683	12450	13683	12450	13683	12450		
RXB;B;4-5;100-126	D/C Ratio	0.40	0.05	0.37	0.20	0.63	0.51	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	48
	Element	13715	13747	13779	12517	13697	12469		
RXB;B;5-6;100-126	D/C Ratio	0.57	0.09	0.39	0.20	0.45	0.35	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	48
	Element	13875	13875	13463	12541	13793	12541		
RXB;B;1-2;126-145	D/C Ratio	0.72	0.12	0.39	0.21	0.42	0.22	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	24
	Element	15601	15601	14634	14634	15601	15601		
RXB;B;2-3;126-145	D/C Ratio	0.24	0.07	0.36	0.12	0.15	0.38	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	28
	Element	15633	15641	15649	14997	14997	14997		

Table 3B-23: Summary of D/C Ratios for Reactor Building Pool Wall at Grid Line B (Continued)

Demand/Capacity Ratios								
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description
RXB;B;3-4;126-145	D/C Ratio	0.32	0.05	0.53	0.23	0.58	1.00	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)
	Element	15699	15683	14739	14739	14739	14739	
RXB;B;4-5;126-145	D/C Ratio	0.46	0.13	0.58	0.27	0.50	0.93	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)
	Element	15401	12682	15713	14761	15738	14746	
RXB;B;5-6;126-145	D/C Ratio	0.63	0.12	0.47	0.21	0.90	0.76	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)
	Element	12688	12688	15786	15094	15440	14797	
RXB;B;6-7;126-145	D/C Ratio	0.49	0.10	0.43	0.14	0.42	0.68	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)
	Element	14855	14855	14855	15510	15861	15861	

Note:

Highlighted items indicate those design check zones that exceed a D/C ratio of 0.8.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17, RAI 03.08.04-34

Table 3B-25: Summary of D/C Ratios for Reactor Building Pool Wall at Grid Line B After Averaging Affected Elements

Demand/Capacity Ratios									
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	Elms Checked
RXB;B;1-2;24-50	D/C Ratio	0.35	0.18	0.43	0.40	0.18	0.28	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	20
	Element	3971	3971	2613	2634	4528	4528		
RXB;B;2-3;24-50	D/C Ratio	0.40	0.12	0.65	0.34	0.28	0.54	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	28
	Element	3016	4545	3016	3016	4545	4578		
RXB;B;3-4;24-50	D/C Ratio	0.57	0.07	0.55	0.22	0.97	0.58	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	44
	Element	4596	3046	4046	3057	4584	4596		
RXB;B;4-5;24-50	D/C Ratio	0.32	0.06	0.41	0.19	0.28	0.46	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	48
	Element	4116	3077	3077	4650	4650	4650		
RXB;B;5-6;24-50	D/C Ratio	0.37	0.12	0.63	0.37	0.33	0.35	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	48
	Element	3161	4878	3163	3163	4878	4878		
RXB;B;1-2;50-75	D/C Ratio	0.34	0.16	0.50	0.31	0.47	0.20	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	21
	Element	6774	6770	6130	5621	6774	6130		
RXB;B;2-3;50-75	D/C Ratio	0.41	0.12	0.52	0.25	0.40	0.54	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	35
	Element	5651	8010	5651	5651	8010	5651		
RXB;B;3-4;50-75	D/C Ratio	0.60	0.10	0.39	0.28	0.59	0.42	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	55
	Element	7294	8068	5770	5701	5701	8068		
RXB;B;4-5;50-75	D/C Ratio	0.54	0.10	0.43	0.21	0.45	0.96	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	60
	Element	7314	7314	5892	8080	7314	8084		
RXB;B;5-6;50-75	D/C Ratio	0.46	0.13	0.67	0.32	0.42	0.65	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	60
	Element	7457	6014	6014	6014	6014	6014		
RXB;B;1-2;75-100	D/C Ratio	0.41	0.11	0.37	0.23	0.34	0.32	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	20
	Element	11377	10434	10788	8894	11377	11377		

Table 3B-25: Summary of D/C Ratios for Reactor Building Pool Wall at Grid Line B After Averaging Affected Elements

		Demand/Capacity Ratios						Description	Elems Checked
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear		
RXB;B;2-3;75-100	D/C Ratio	0.54	0.09	0.55	0.20	0.39	0.38	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	28
	Element	11536	8919	11536	8919	11536	8919		
RXB;B;3-4;75-100	D/C Ratio	0.46	0.08	0.35	0.22	0.55	0.44	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	44
	Element	9075	9075	9075	9075	9075	9075		
RXB;B;4-5;75-100	D/C Ratio	0.35	0.06	0.35	0.23	0.43	0.41	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	48
	Element	10858	9121	9214	9214	11591	9096		
RXB;B;5-6;75-100	D/C Ratio	0.44	0.13	0.59	0.26	0.39	0.54	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	48
	Element	9947	9354	9354	9354	9354	9354		
RXB;B;1-2;100-126	D/C Ratio	0.43	0.10	0.45	0.23	0.27	0.49	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	20
	Element	13171	13171	13554	13554	12337	13554		
RXB;B;2-3;100-126	D/C Ratio	0.32	0.09	0.58	0.28	0.27	0.36	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	28
	Element	12371	13176	12371	12371	12371	12371		
RXB;B;3-4;100-126	D/C Ratio	0.49	0.06	0.52	0.19	0.77	0.54	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	44
	Element	13683	12450	13683	12450	13683	12450		
RXB;B;4-5;100-126	D/C Ratio	0.40	0.05	0.37	0.20	0.63	0.51	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	48
	Element	13715	13747	13779	12517	13697	12469		
RXB;B;5-6;100-126	D/C Ratio	0.57	0.09	0.39	0.20	0.45	0.35	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	48
	Element	13875	13875	13463	12541	13793	12541		
RXB;B;1-2;126-145	D/C Ratio	0.72	0.12	0.39	0.21	0.42	0.22	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	24
	Element	15601	15601	14634	14634	15601	15601		
RXB;B;2-3;126-145	D/C Ratio	0.24	0.07	0.36	0.12	0.15	0.38	5'-0" Pool Wall (0.25" on one side for liner plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)	28
	Element	15633	15641	15649	14997	14997	14997		

Table 3B-25: Summary of D/C Ratios for Reactor Building Pool Wall at Grid Line B After Averaging Affected Elements

Demand/Capacity Ratios								
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description
RXB;B;3-4;126-145	D/C Ratio	0.32	0.05	0.53	0.23	0.58	0.96	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)
	Element	15699	15683	14739	14739	14739	14739	
RXB;B;4-5;126-145	D/C Ratio	0.46	0.13	0.58	0.27	0.50	0.93	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)
	Element	15401	12682	15713	14761	15738	14746	
RXB;B;5-6;126-145	D/C Ratio	0.63	0.12	0.47	0.21	0.90	0.76	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)
	Element	12688	12688	15786	15094	15440	14797	
RXB;B;6-7;126-145	D/C Ratio	0.49	0.10	0.43	0.14	0.42	0.68	5'-0" Pool Wall (0.25" on one side for liner-plate); 4 Layers EWEF (#11 @ 12" c/c); 2-Leg Stirrup (#6 @ 12" c/c)
	Element	14855	14855	14855	15510	15861	15861	

Note: The highlighted values of the D/C ratios for the corresponding element shown in this table is based on the averaged demand values. It should be noted that the D/C ratios of all other elements shown in this table will be proportionally reduced if the same averaging methodology is used.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Table 3B-28: Summary of D/C Ratios for Control Building Wall at Grid Line 3

Demand/Capacity Ratios									
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	# Elems Checked
CRB;3;B-A;50-76	D/C Ratio	0.39	0.06	0.37	0.17	0.38	0.43	2'-0" Interior Wall; 2 Layer EWEF- {#9 @ 12" c/c}	15
	Element	714	927	716	714	1487	1488		
CRB;3;B-A;76-100	D/C Ratio	0.43	0.07	0.46	0.10	0.30	0.43	2'-0" Interior Wall; 2 Layer EWEF- {#9 @ 12" c/c}	15
	Element	2178	2178	2029	2029	2030	2482		
CRB;3;B-A;100-120	D/C Ratio	0.34	0.06	0.43	0.11	0.22	0.70	2'-0" Interior Wall; 2 Layer EWEF- {#9 @ 12" c/c}	11
	Element	3131	3275	2994	3276	3276	3276		
CRB;3;B-A;120-141	D/C Ratio	0.27	0.06	0.38	0.07	0.34	0.94	2'-0" Interior Wall; 2 Layer EWEF- {#9 @ 12" c/c}	6
	Element	3712	3712	3712	3777	3712	3712		
CRB;3;C-B;50-76	D/C Ratio	0.60	0.09	0.41	0.17	0.26	0.36	2'-0" Interior Wall; 2 Layer EWEF- {#9 @ 12" c/c}	29
	Element	709	709	711	710	1479	1479		
CRB;3;C-B;76-100	D/C Ratio	0.49	0.07	0.55	0.20	0.13	0.49	2'-0" Interior Wall; 2 Layer EWEF- {#9 @ 12" c/c}	28
	Element	2028	2176	2028	2026	2175	2026		
CRB;3;C-B;100-120	D/C Ratio	0.38	0.06	0.51	0.13	0.16	0.61	2'-0" Interior Wall; 2 Layer EWEF- {#9 @ 12" c/c}	22
	Element	2993	3127	2993	2993	3268	2993		
CRB;3;D-C;50-76	D/C Ratio	0.52	0.07	0.42	0.14	0.28	0.33	2'-0" Interior Wall; 2 Layer EWEF- {#9 @ 12" c/c}	7
	Element	708	916	708	708	1476	1476		
CRB;3;D-C;76-100	D/C Ratio	0.42	0.08	0.35	0.10	0.20	0.33	2'-0" Interior Wall; 2 Layer EWEF- {#9 @ 12" c/c}	7
	Element	2169	2169	2024	2024	2471	2024		
CRB;3;D-C;100-120	D/C Ratio	0.21	0.03	0.21	0.06	0.28	0.25	2'-0" Interior Wall; 2 Layer EWEF- {#9 @ 12" c/c}	5
	Element	3121	3121	2987	2987	3264	2987		
CRB;3;E-D;50-76	D/C Ratio	0.52	0.09	0.47	0.16	0.22	0.34	2'-0" Interior Wall; 2 Layer EWEF- {#9 @ 12" c/c}	18
	Element	706	706	705	705	1471	1472		
CRB;3;E-D;76-100	D/C Ratio	0.33	0.06	0.37	0.08	0.15	0.31	2'-0" Interior Wall; 2 Layer EWEF- {#9 @ 12" c/c}	20
	Element	2022	2167	2022	2021	2318	2023		
CRB;3;E-D;100-120	D/C Ratio	0.13	0.04	0.13	0.05	0.15	0.18	2'-0" Interior Wall; 2 Layer EWEF- {#9 @ 12" c/c}	14
	Element	3120	3120	2986	3259	3263	3263		

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Table 3B-29: Summary of D/C Ratios for Control Building Wall at Grid Line 4

Demand/Capacity Ratios									
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	# Elems Checked
CRB;4;B-A;50-76	D/C Ratio	0.63	0.11	0.78	0.21	0.55	1.16	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)	24
	Element	790	793	789	789	793	788		
CRB;4;B-A;76-100	D/C Ratio	0.28	0.06	0.22	0.13	0.42	0.34	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)	24
	Element	2233	2082	2382	2082	2082	2077		
CRB;4;B-A;100-120	D/C Ratio	0.20	0.05	0.28	0.10	0.34	0.32	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c)	17
	Element	3328	3327	3043	3043	3185	3043		
CRB;4;B-A;120-140	D/C Ratio	0.18	0.05	0.18	0.07	0.20	0.15	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c)	8
	Element	3937	3937	3750	3750	3937	3749		
CRB;4;C-B;50-76	D/C Ratio	0.48	0.09	0.77	0.24	0.40	1.38	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)	32
	Element	781	781	786	786	999	786		
CRB;4;C-B;76-100	D/C Ratio	0.22	0.03	0.29	0.08	0.16	0.35	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)	32
	Element	2524	2076	2221	2221	2372	2528		
CRB;4;C-B;100-120	D/C Ratio	0.18	0.04	0.13	0.03	0.17	0.20	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c)	23
	Element	3324	3324	3032	3032	3173	3038		
CRB;4;D-C;50-76	D/C Ratio	0.33	0.06	0.43	0.15	0.36	0.65	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)	8
	Element	779	778	778	778	778	779		
CRB;4;D-C;76-100	D/C Ratio	0.20	0.03	0.17	0.09	0.25	0.19	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)	8
	Element	2218	2068	2067	2067	2218	2523		
CRB;4;D-C;100-120	D/C Ratio	0.12	0.02	0.14	0.04	0.18	0.34	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c)	5
	Element	3172	3172	3031	3031	3315	3031		
CRB;4;E-D;50-76	D/C Ratio	0.58	0.09	0.53	0.22	0.49	0.59	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)	28
	Element	777	777	775	775	1341	774		
CRB;4;E-D;76-100	D/C Ratio	0.30	0.06	0.24	0.12	0.46	0.27	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)	28
	Element	2211	2060	2367	2060	2060	2064		

Table 3B-29: Summary of D/C Ratios for Control Building Wall at Grid Line 4 (Continued)

Demand/Capacity Ratios								
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description
CRB;4;E-D;100-120	D/C Ratio	0.25	0.05	0.23	0.09	0.43	0.28	3'-0" Exterior Wall; 2 Layers EWEF (#11 @ 12" c/c)
	Element	3310	3309	3025	3025	3165	3030	
CRB;4;E-D;120-140	D/C Ratio	0.26	0.06	0.18	0.06	0.25	0.14	3'-0" Exterior Wall; 2 Layers EWEF (#11 @ 12" c/c)
	Element	3740	3928	3740	3739	3928	3740	

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17, RAI 03.08.04-34

Table 3B-31: Summary of D/C Ratios for Control Building Wall at Grid Line 4 After Averaging Affected Elements

Demand/Capacity Ratios									
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	# Elems Checked
CRB;4;B-A;50-76	D/C Ratio	0.63	0.11	0.78	0.21	0.55	0.78	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)	24
	Element	790	793	789	789	793	788		
CRB;4;B-A;76-100	D/C Ratio	0.28	0.06	0.22	0.13	0.42	0.34	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)	24
	Element	2233	2082	2382	2082	2082	2077		
CRB;4;B-A;100-120	D/C Ratio	0.20	0.05	0.28	0.10	0.34	0.32	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c)	17
	Element	3328	3327	3043	3043	3185	3043		
CRB;4;B-A;120-140	D/C Ratio	0.18	0.05	0.18	0.07	0.20	0.15	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c)	8
	Element	3937	3937	3750	3750	3937	3749		
CRB;4;C-B;50-76	D/C Ratio	0.48	0.09	0.77	0.24	0.40	0.78	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)	32
	Element	781	781	786	786	999	786		
CRB;4;C-B;76-100	D/C Ratio	0.22	0.03	0.29	0.08	0.16	0.35	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)	32
	Element	2524	2076	2221	2221	2372	2528		
CRB;4;C-B;100-120	D/C Ratio	0.18	0.04	0.13	0.03	0.17	0.20	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c)	23
	Element	3324	3324	3032	3032	3173	3038		
CRB;4;D-C;50-76	D/C Ratio	0.33	0.06	0.43	0.15	0.36	0.65	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)	8
	Element	779	778	778	778	778	779		
CRB;4;D-C;76-100	D/C Ratio	0.20	0.03	0.17	0.09	0.25	0.19	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)	8
	Element	2218	2068	2067	2067	2218	2523		
CRB;4;D-C;100-120	D/C Ratio	0.12	0.02	0.14	0.04	0.18	0.34	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c)	5
	Element	3172	3172	3031	3031	3315	3031		
CRB;4;E-D;50-76	D/C Ratio	0.58	0.09	0.53	0.22	0.49	0.59	3'-0" Exterior Wall; 2 Layers EWEF- (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)	28
	Element	777	777	775	775	1341	774		

Table 3B-31: Summary of D/C Ratios for Control Building Wall at Grid Line 4 After Averaging Affected Elements (Continued)

Demand/Capacity Ratios									
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description	# Elems Checked
CRB;4;E-D;76-100	D/C Ratio	0.30	0.06	0.24	0.12	0.46	0.27	3'-0" Exterior Wall; 2 Layers EWEF (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)	28
	Element	2211	2060	2367	2060	2060	2064		
CRB;4;E-D;100-120	D/C Ratio	0.25	0.05	0.23	0.09	0.43	0.28	3'-0" Exterior Wall; 2 Layers EWEF (#11 @ 12" c/c)	20
	Element	3310	3309	3025	3025	3165	3030		
CRB;4;E-D;120-140	D/C Ratio	0.26	0.06	0.18	0.06	0.25	0.14	3'-0" Exterior Wall; 2 Layers EWEF (#11 @ 12" c/c)	8
	Element	3740	3928	3740	3739	3928	3740		

Note:

The highlighted values of the D/C ratios for the corresponding element shown in this table are based on the averaged demand values. It should be noted that the D/C ratios of the other elements shown in this table will be proportionally reduced if the same averaging methodology is used.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Table 3B-32: Summary of D/C Ratios for Control Building Wall at Grid Line A

Demand/Capacity Ratios								
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description
CRB;A;1-2;50-63	D/C Ratio	0.90	0.11	0.89	0.22	0.67	0.95	3'-0" Exterior Wall; 2 Layers EWEF (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)
	Element	643	635	639	647	635	639	
CRB;A;2-2.8;50-63	D/C Ratio	0.52	0.09	0.39	0.16	0.46	0.43	3'-0" Exterior Wall; 2 Layers EWEF (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)
	Element	692	692	692	903	698	692	
CRB;A;2.8-4;50-63	D/C Ratio	0.54	0.09	0.47	0.21	0.54	0.84	3'-0" Exterior Wall; 2 Layers EWEF (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)
	Element	770	770	770	770	982	770	
CRB;A;1-2;63-76	D/C Ratio	0.56	0.07	0.56	0.16	0.54	0.62	3'-0" Exterior Wall; 2 Layers EWEF (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)
	Element	1220	1200	1212	1200	1200	1416	
CRB;A;2-2.8;63-76	D/C Ratio	0.43	0.06	0.32	0.15	0.50	0.25	3'-0" Exterior Wall; 2 Layers EWEF (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)
	Element	1258	1241	1251	1258	1461	1444	
CRB;A;2.8-4;63-76	D/C Ratio	0.34	0.05	0.24	0.15	0.76	0.12	3'-0" Exterior Wall; 2 Layers EWEF (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)
	Element	1469	1340	1296	1266	1469	1521	
CRB;A;1-2;76-100	D/C Ratio	0.41	0.05	0.39	0.13	0.40	0.51	3'-0" Exterior Wall; 2 Layers EWEF (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)
	Element	2122	1990	1990	1978	2273	1987	
CRB;A;2-2.8;76-100	D/C Ratio	0.37	0.04	0.21	0.11	0.48	0.29	3'-0" Exterior Wall; 2 Layers EWEF (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)
	Element	2306	2002	2005	2002	2011	2002	
CRB;A;2.8-4;76-100	D/C Ratio	0.28	0.05	0.20	0.13	0.71	0.16	3'-0" Exterior Wall; 2 Layers EWEF (#11 @ 12" c/c); 1 Leg Stirrup (#6 @ 12" c/c)
	Element	2049	2018	2514	2059	2018	2502	
CRB;A;1-2;100-120	D/C Ratio	0.23	0.02	0.16	0.05	0.18	0.19	3'-0" Exterior Wall; 2 Layers EWEF (#11 @ 12" c/c)
	Element	3230	2955	2937	2937	3233	3230	
CRB;A;2-2.8;100-120	D/C Ratio	0.33	0.04	0.31	0.06	0.36	0.15	3'-0" Exterior Wall; 2 Layers EWEF (#11 @ 12" c/c)
	Element	3251	3251	3251	3251	2975	2961	

Table 3B-32: Summary of D/C Ratios for Control Building Wall at Grid Line A (Continued)

Demand/Capacity Ratios								
Section		Horizontal Reinf.	Horiz. Comp. Stress	Vertical Reinf.	Vert. Comp. Stress	XZ-Plane Shear	YZ-Plane Shear	Description
CRB;A;2.8-4;100-120	D/C Ratio	0.20	0.04	0.25	0.08	0.78	0.41	3'-0" Exterior Wall; 2 Layers EWEF (#11 @ 12" c/c)
	Element	2982	3283	3024	3024	2982	3014	
CRB;A;2.8-4;120-140	D/C Ratio	0.26	0.06	0.23	0.08	0.46	0.28	3'-0" Exterior Wall; 2 Layers EWEF (#11 @ 12" c/c)
	Element	3906	3711	3711	3711	3906	3711	

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Table 3B-42: Summary of D/C Ratios for Control Building Slab at EL. 100'-0"

		Demand/Capacity Ratios						Description	# Elems Checked
Section		East-West Reinf.	E-W Comp. Stress	North-South Reinf.	N-S Comp. Stress	XZ-Plane Shear	YZ-Plane Shear		
CRB;100;7-1;D-E	D/C Ratio	0.82	0.19	0.84	0.14	0.51	1.13	3'-0" Floor Slab; 2 Layer EWEF (#11 @ 12" c/c); 1 Leg Stirrups (#6 @ 12" c/c)	10
	Element	2543	2539	2538	2538	2539	2538		
CRB;100;1-2;D-E	D/C Ratio	0.96	0.17	0.38	0.03	0.80	0.50	3'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	55
	Element	2562	2562	2561	2718	2562	2649		
CRB;100;2-3;D-E	D/C Ratio	0.33	0.05	0.27	0.06	0.51	0.38	3'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	22
	Element	2742	2764	2764	2764	2764	2747		
CRB;100;3-4;D-E	D/C Ratio	0.17	0.03	0.09	0.02	0.53	0.30	2'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	25
	Element	2895	2824	2893	2827	2897	2827		
CRB;100;7-1;C-D	D/C Ratio	0.84	0.21	0.62	0.10	0.56	0.95	3'-0" Floor Slab; 2 Layer EWEF (#11 @ 12" c/c); 1 Leg Stirrups (#6 @ 12" c/c)	10
	Element	2540	2557	2541	2541	2540	2541		
CRB;100;1-2;C-D	D/C Ratio	1.00	0.16	0.30	0.03	1.01	0.48	3'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	16
	Element	2565	2565	2610	2564	2565	2679		
CRB;100;2-3;C-D	D/C Ratio	0.20	0.03	0.30	0.03	0.37	0.39	3'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	8
	Element	2749	2749	2748	2748	2789	2809		
CRB;100;3-4;C-D	D/C Ratio	0.15	0.04	0.12	0.02	0.52	0.44	2'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	10
	Element	2829	2899	2899	2899	2898	2899		
CRB;100;1-2;B-C	D/C Ratio	1.09	0.13	0.53	0.04	0.84	0.32	3'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	64
	Element	2566	2566	2566	2567	2573	2566		
CRB;100;2-3;B-C	D/C Ratio	0.25	0.03	0.19	0.03	0.66	0.35	3'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	32
	Element	2812	2750	2817	2816	2817	2816		
CRB;100;3-4;B-C	D/C Ratio	0.26	0.06	0.15	0.03	0.50	0.44	2'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	40
	Element	2837	2907	2900	2834	2835	2900		
CRB;100;1-2;A-B	D/C Ratio	0.47	0.03	0.38	0.03	0.83	0.47	3'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	48
	Element	2574	2574	2671	2740	2574	2694		
CRB;100;2-3;A-B	D/C Ratio	0.40	0.03	0.35	0.06	0.60	0.48	3'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	20
	Element	2822	2822	2763	2802	2822	2763		
CRB;100;3-4;A-B	D/C Ratio	0.28	0.06	0.18	0.03	0.58	0.35	2'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	14
	Element	2838	2908	2891	2890	2839	2838		

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17, RAI 03.08.04-34

Table 3B-46: Summary of D/C Ratios for Control Building Slab at EL. 100'-0" After Averaging Affected Elements

		Demand/Capacity Ratios						Description	# Elems Checked
Section		East-West Reinf.	E-W Comp. Stress	North-South Reinf.	N-S Comp. Stress	XZ-Plane Shear	YZ-Plane Shear		
CRB;100;7-1;D-E	D/C Ratio	0.82	0.19	0.84	0.14	0.51	0.60	3'-0" Floor Slab; 2 Layer EWEF (#11 @ 12" c/c); 1 Leg Stirrups (#6 @ 12" c/c)	10
	Element	2543	2539	2538	2538	2539	2538		
CRB;100;1-2;D-E	D/C Ratio	0.96	0.17	0.38	0.03	0.80	0.50	3'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	55
	Element	2562	2562	2561	2718	2562	2649		
CRB;100;2-3;D-E	D/C Ratio	0.33	0.05	0.27	0.06	0.51	0.38	3'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	22
	Element	2742	2764	2764	2764	2764	2747		
CRB;100;3-4;D-E	D/C Ratio	0.17	0.03	0.09	0.02	0.53	0.30	2'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	25
	Element	2895	2824	2893	2827	2897	2827		
CRB;100;7-1;C-D	D/C Ratio	0.84	0.21	0.62	0.10	0.56	0.95	3'-0" Floor Slab; 2 Layer EWEF (#11 @ 12" c/c); 1 Leg Stirrups (#6 @ 12" c/c)	10
	Element	2540	2557	2541	2541	2540	2541		
CRB;100;1-2;C-D	D/C Ratio	0.84	0.16	0.30	0.03	0.73	0.48	3'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	16
	Element	2565	2565	2610	2564	2565	2679		
CRB;100;2-3;C-D	D/C Ratio	0.20	0.03	0.30	0.03	0.37	0.39	3'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	8
	Element	2749	2749	2748	2748	2789	2809		
CRB;100;3-4;C-D	D/C Ratio	0.15	0.04	0.12	0.02	0.52	0.44	2'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	10
	Element	2829	2899	2899	2899	2898	2899		
CRB;100;1-2;B-C	D/C Ratio	0.84	0.13	0.53	0.04	0.84	0.32	3'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	64
	Element	2566	2566	2566	2567	2573	2566		
CRB;100;2-3;B-C	D/C Ratio	0.25	0.03	0.19	0.03	0.66	0.35	3'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	32
	Element	2812	2750	2817	2816	2817	2816		
CRB;100;3-4;B-C	D/C Ratio	0.26	0.06	0.15	0.03	0.50	0.44	2'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	40
	Element	2837	2907	2900	2834	2835	2900		
CRB;100;1-2;A-B	D/C Ratio	0.47	0.03	0.38	0.03	0.83	0.47	3'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	48
	Element	2574	2574	2671	2740	2574	2694		
CRB;100;2-3;A-B	D/C Ratio	0.40	0.03	0.35	0.06	0.60	0.48	3'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	20
	Element	2822	2822	2763	2802	2822	2763		
CRB;100;3-4;A-B	D/C Ratio	0.28	0.06	0.18	0.03	0.58	0.35	2'-0" Floor Slab; 1 Layer EWEF (#11 @ 12" c/c)	14
	Element	2838	2908	2891	2890	2839	2838		

Note: The **bold highlighted** values of the D-C ratios for the corresponding element shown in this Table is based on the averaged demand values using methodology shown in Section 3B.1.1.1. It should be noted that the D-C ratios of all other elements shown in this Table will be proportionally reduced if the same averaging methodology is used.

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Table 3B-48: Summary of D/C Ratios for Control Building Pilasters on Grid Line 1 Wall

Demand/Capacity Ratios							
Section		Moment Axis 3	Shear Axis 2	Compression	Tension	Description	# Elems Checked
CRB;PI;1C;50-63	D/C Ratio	0.50	0.33	0.06	0.06	3'-0" x 6'-0" Pilaster; 22 #11; 1 #6 Tie Wrap @ 12"c/c	3
	Element	245	2	245	646		
CRB;PI;1B;50-76	D/C Ratio	0.62	0.95	0.06	0.04	3'-0" x 6'-0" Pilaster; 22 #11; 1 #6 Tie Wrap @ 12"c/c	5
	Element	647	667	246	667		
CRB;PI;1C;63-76	D/C Ratio	0.15	0.12	0.02	0.07	3'-0" x 6'-0" Pilaster; 22 #11; 1 #6 Tie Wrap @ 12"c/c	2
	Element	666	666	656	666		
CRB;PI;1C;76-100	D/C Ratio	0.41	0.24	0.02	0.09	3'-0" x 6'-0" Pilaster; 22 #11; 1 #6 Tie Wrap @ 12"c/c	4
	Element	696	706	706	696		
CRB;PI;1B;76-100	D/C Ratio	0.52	0.84	0.03	0.04	3'-0" x 6'-0" Pilaster; 22 #11; 1 #6 Tie Wrap @ 12"c/c	4
	Element	697	677	677	677		
CRB;PI;1C;100-120	D/C Ratio	0.51	0.32	0.03	0.08	3'-0" x 6'-0" Pilaster; 22 #11; 1 #6 Tie Wrap @ 12"c/c	3
	Element	821	801	801	801		
CRB;PI;1B;100-120	D/C Ratio	0.67	0.39	0.02	0.02	3'-0" x 6'-0" Pilaster; 22 #11; 1 #6 Tie Wrap @ 12"c/c	3
	Element	822	812	822	802		

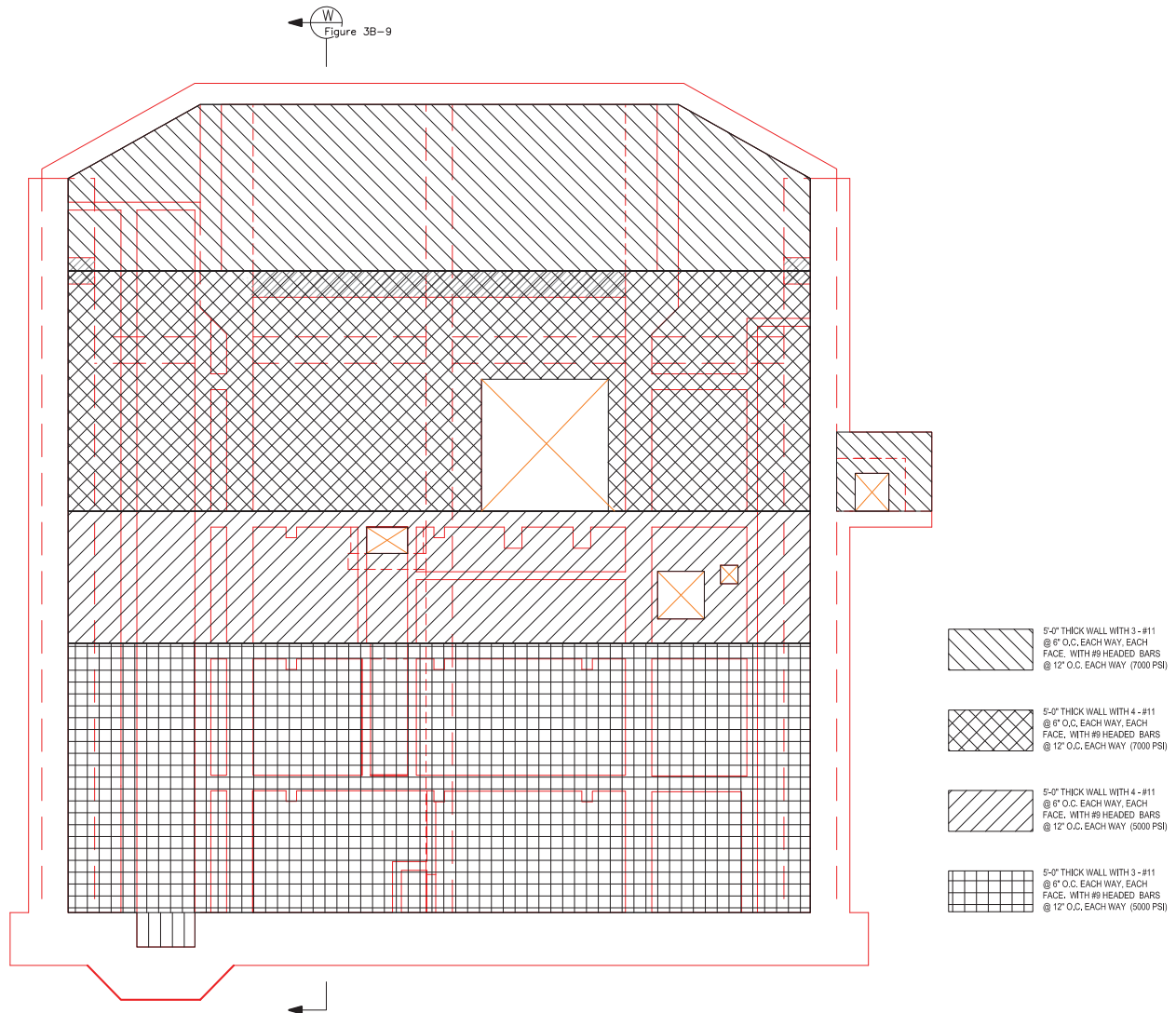
RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Table 3B-49: Summary of D/C Ratios for Control Building T-Beams on EL. 120'-0" Slab

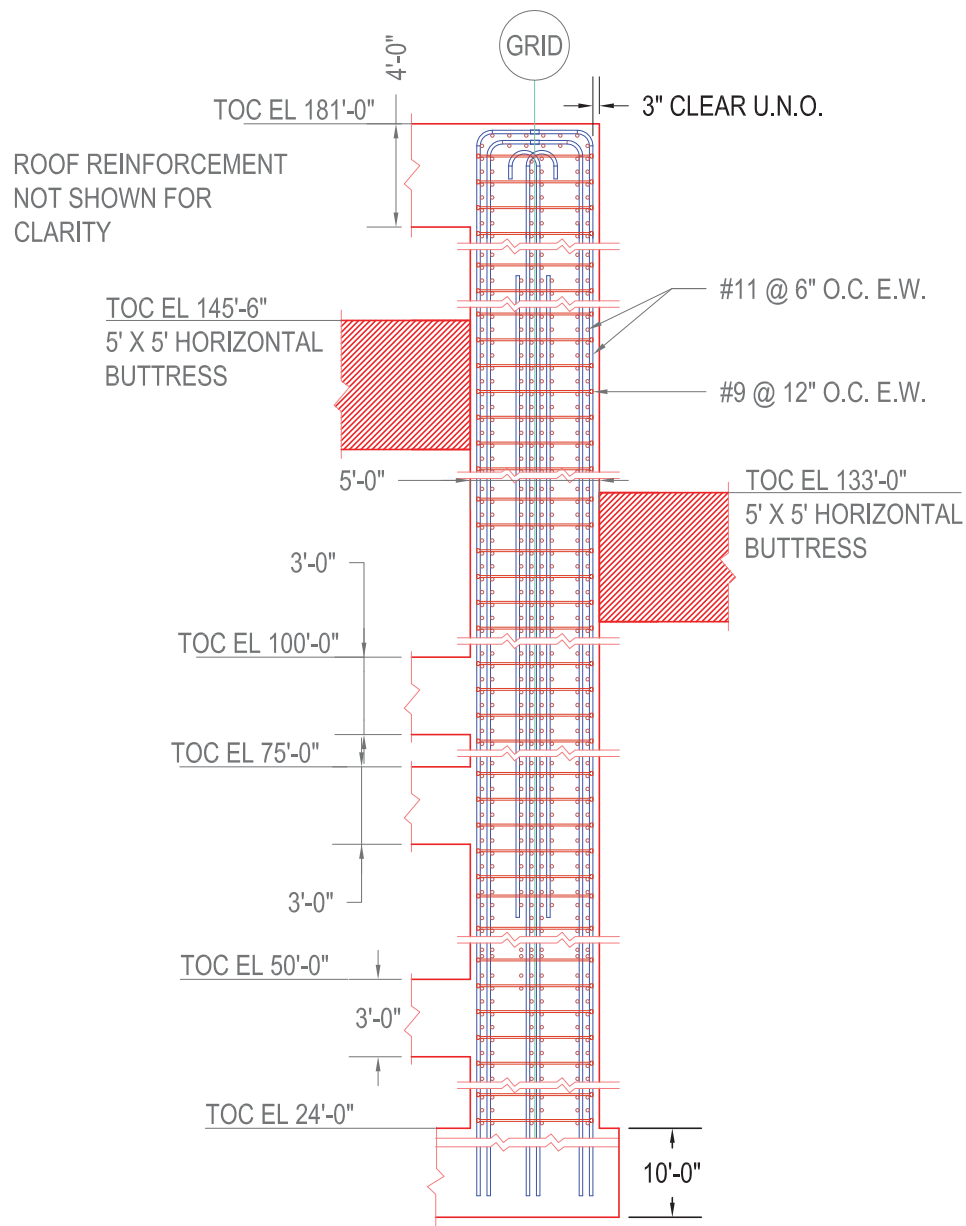
		Demand/Capacity Ratios					# Elems Checked
Section		Moment Axis 3	Shear Axis 2	Compression	Tension	Description	
CRB;TB;120;D-E;1-2(1)	D/C Ratio	0.32	0.17	0.00	0.02	5'-X-3'-T Beam Section; 2 rows of 6 #9 bars; Double leg Stirrup (#6 @ 12" c/c)	7
	Element	850	854	852	853		
CRB;TB;120;D-E;1-2(2)	D/C Ratio	0.27	0.16	0.00	0.01	5'-X-3'-T Beam Section; 2 rows of 6 #9 bars; Double leg Stirrup (#6 @ 12" c/c)	7
	Element	879	879	874	874		
CRB;TB;120;1-3;C-C	D/C Ratio	0.45	0.19	0.00	0.01	5'-X-3'-T Beam Section; 2 rows of 6 #9 bars; Double leg Stirrup (#6 @ 12" c/c)	12
	Element	830	830	886	904		
CRB;TB;120;1-3;B-C(2)	D/C Ratio	0.59	0.21	0.00	0.01	5'-X-3'-T Beam Section; 2 rows of 6 #9 bars; Double leg Stirrup (#6 @ 12" c/c)	12
	Element	868	837	843	831		
CRB;TB;120;1-3;B-C(1)	D/C Ratio	0.77	0.25	0.00	0.01	5'-X-3'-T Beam Section; 2 rows of 6 #9 bars; Double leg Stirrup (#6 @ 12" c/c)	12
	Element	869	838	844	832		
CRB;TB;120;1-3;B-B	D/C Ratio	0.75	0.45	0.01	0.01	5'-X-3'-T Beam Section; 2 rows of 6 #11 bars; Double leg Stirrup (#6 @ 12" c/c)	12
	Element	833	833	833	833		
CRB;TB;120;1-3;A-B(2)	D/C Ratio	0.58	0.21	0.01	0.05	5'-X-3'-T Beam Section; 2 rows of 6 #9 bars; Double leg Stirrup (#6 @ 12" c/c)	12
	Element	871	914	914	914		
CRB;TB;120;1-3;A-B(1)	D/C Ratio	0.30	0.25	0.02	0.11	5'-X-3'-T Beam Section; 2 rows of 6 #9 bars; Double leg Stirrup (#6 @ 12" c/c)	11
	Element	872	909	909	909		

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Figure 3B-8: RXB Reinforcement Elevation at Grid Line 1 Wall



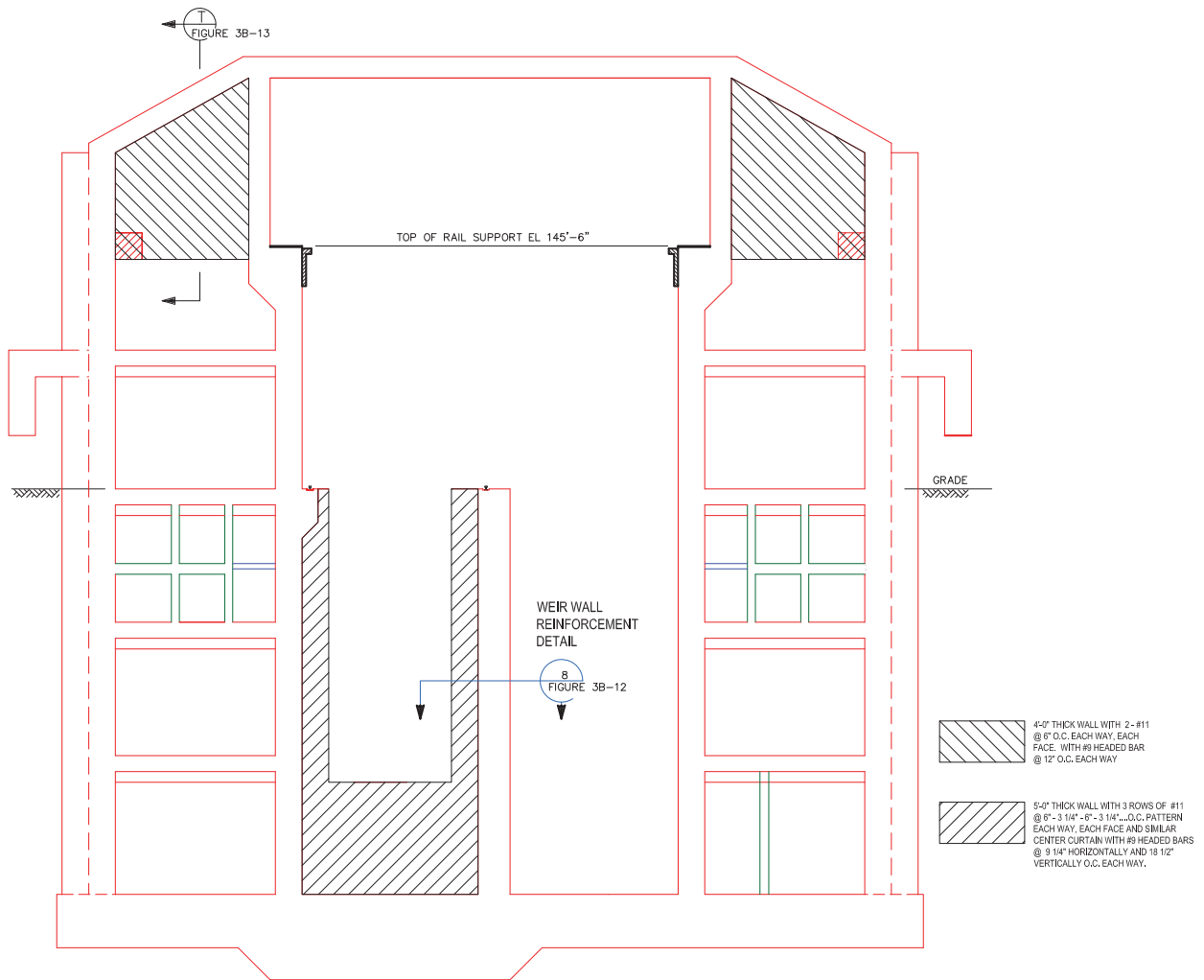
RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Figure 3B-9: RXB Reinforcement Section View of Wall on Grid Line 1

SECTION W
SCALE: NTS
FIGURE 3B-8

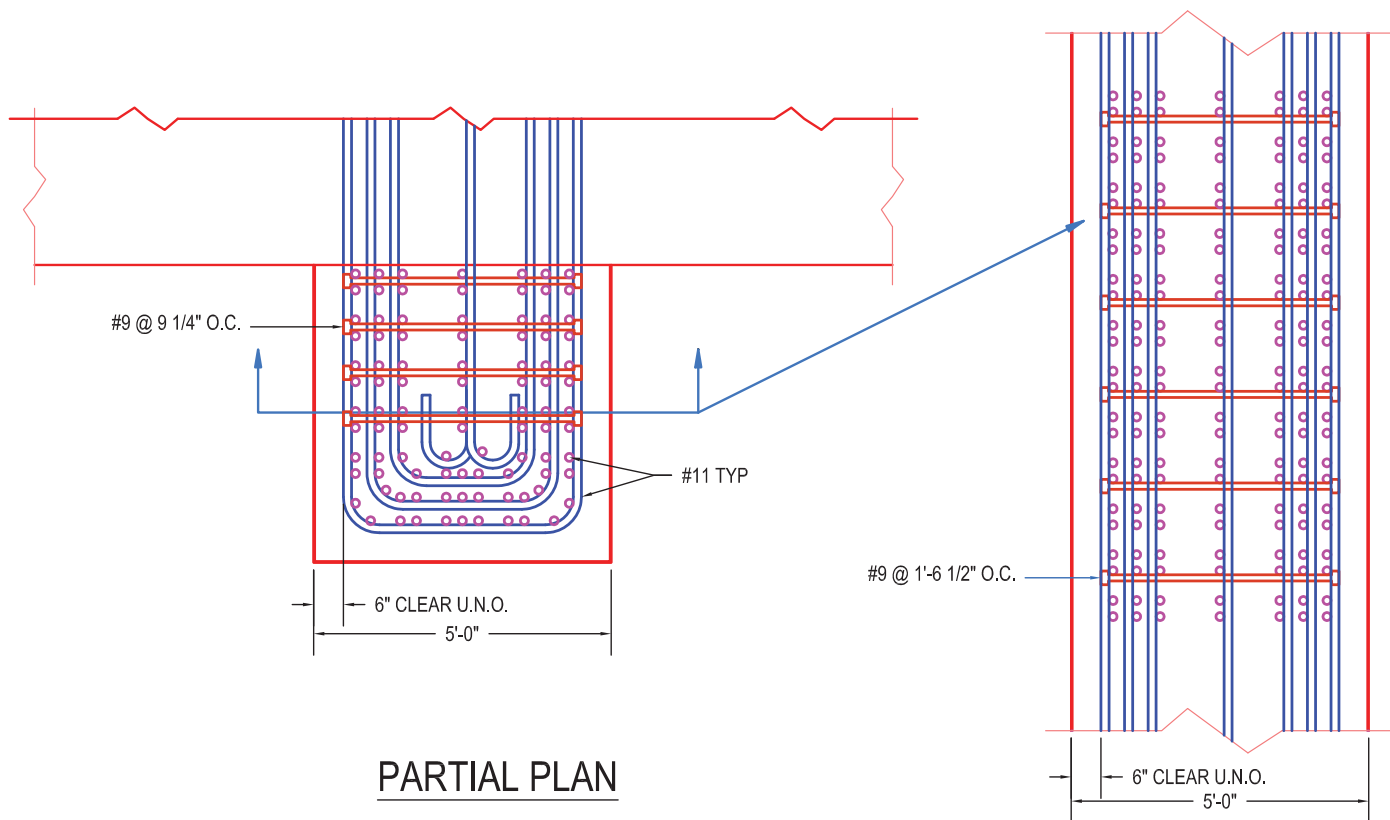
RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Figure 3B-11: RXB Reinforcement Elevation at Grid Line 3 Wall



RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Figure 3B-12: RXB Reinforcement Section View of Pool Weir Wall on Grid Line 3



PARTIAL PLAN

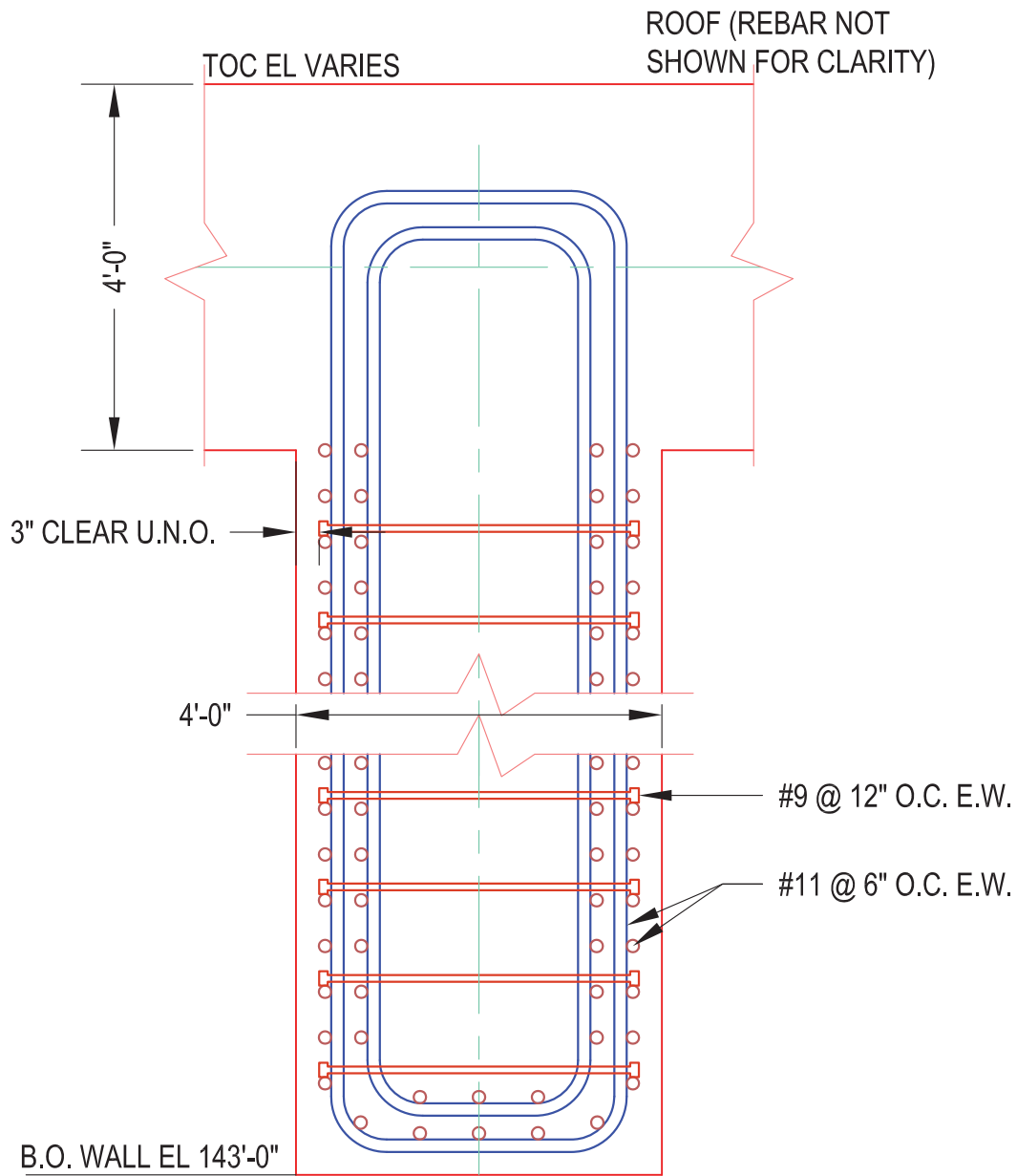
WEIR PILASTER DETAIL

SCALE: NTS

8

FIGURE 3B-11

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

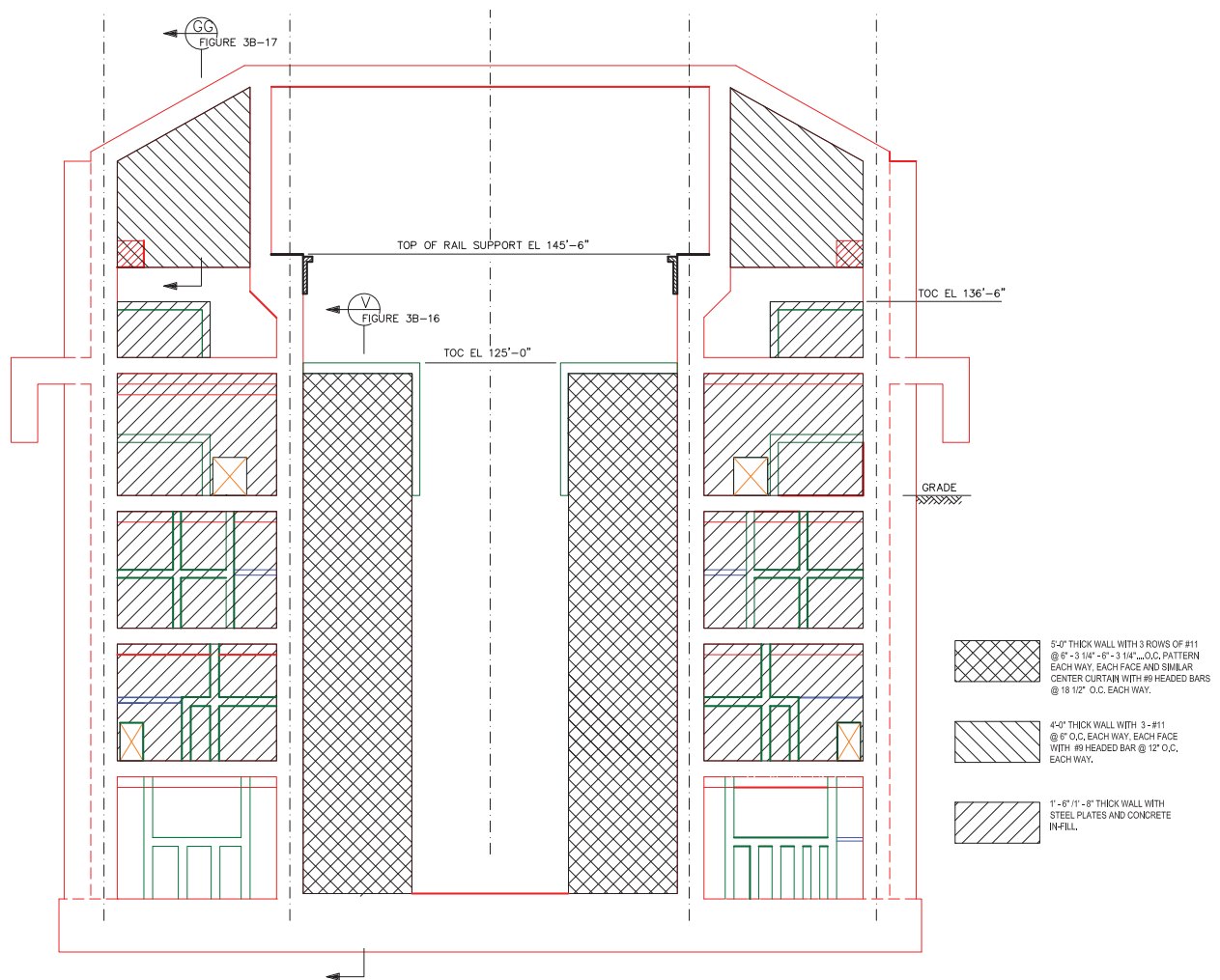
Figure 3B-13: RXB Reinforcement Section View of Stiffener Wall on Grid Line 3

SECTION
SCALE: NTS

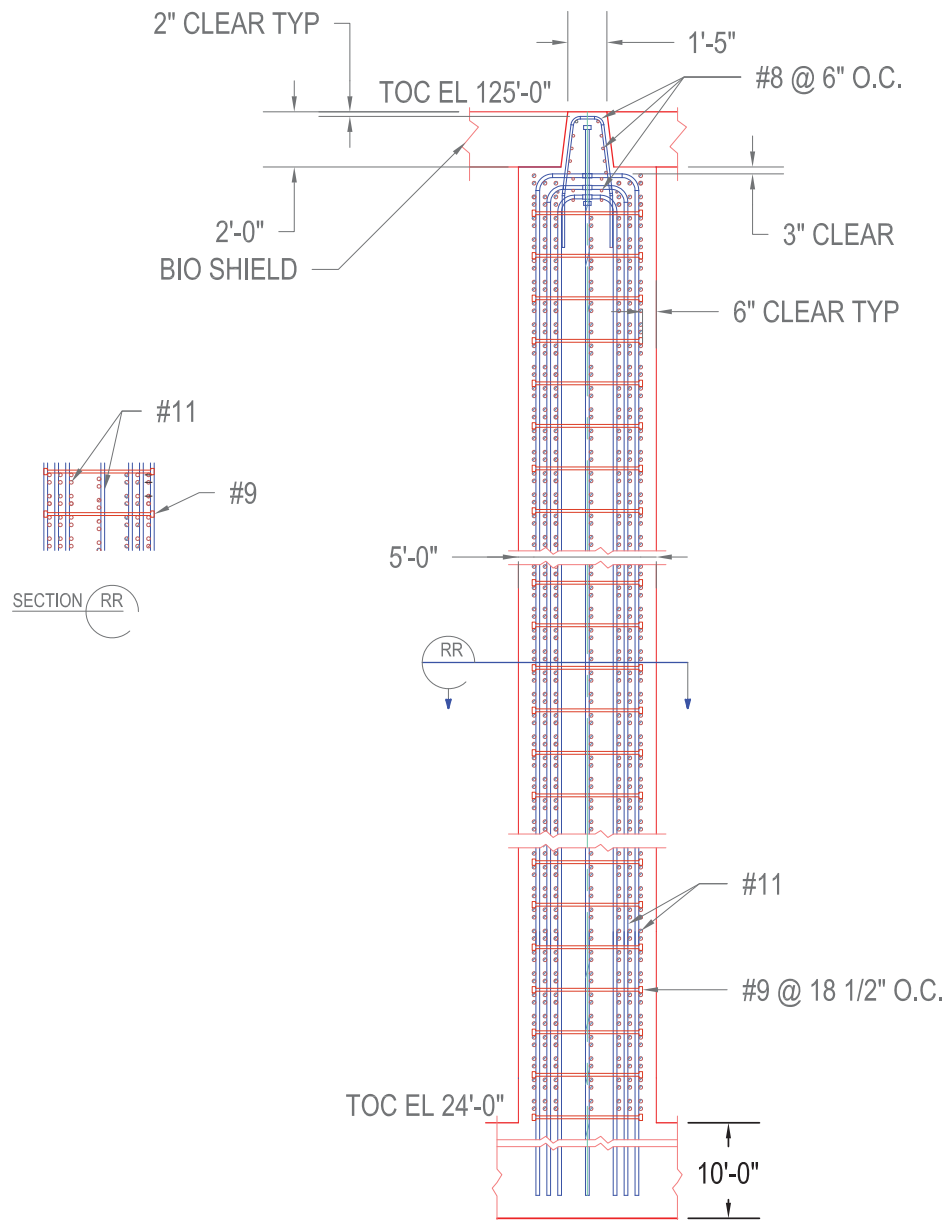
T
FIGURE 3B-11

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

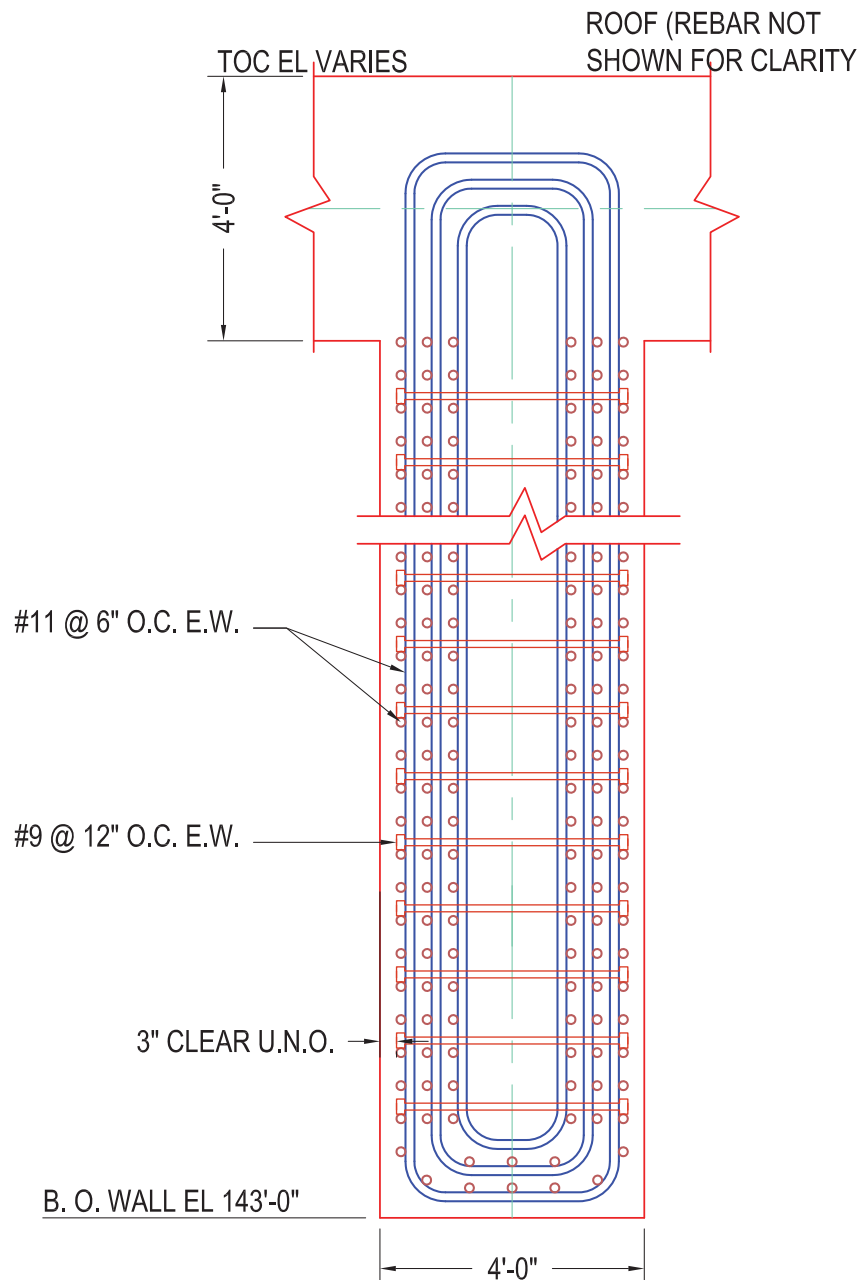
Figure 3B-15: RXB Reinforcement Elevation at Grid Line 4 Wall



RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Figure 3B-16: RXB Reinforcement Section View of 5 ft Thick Wall on Grid Line 4

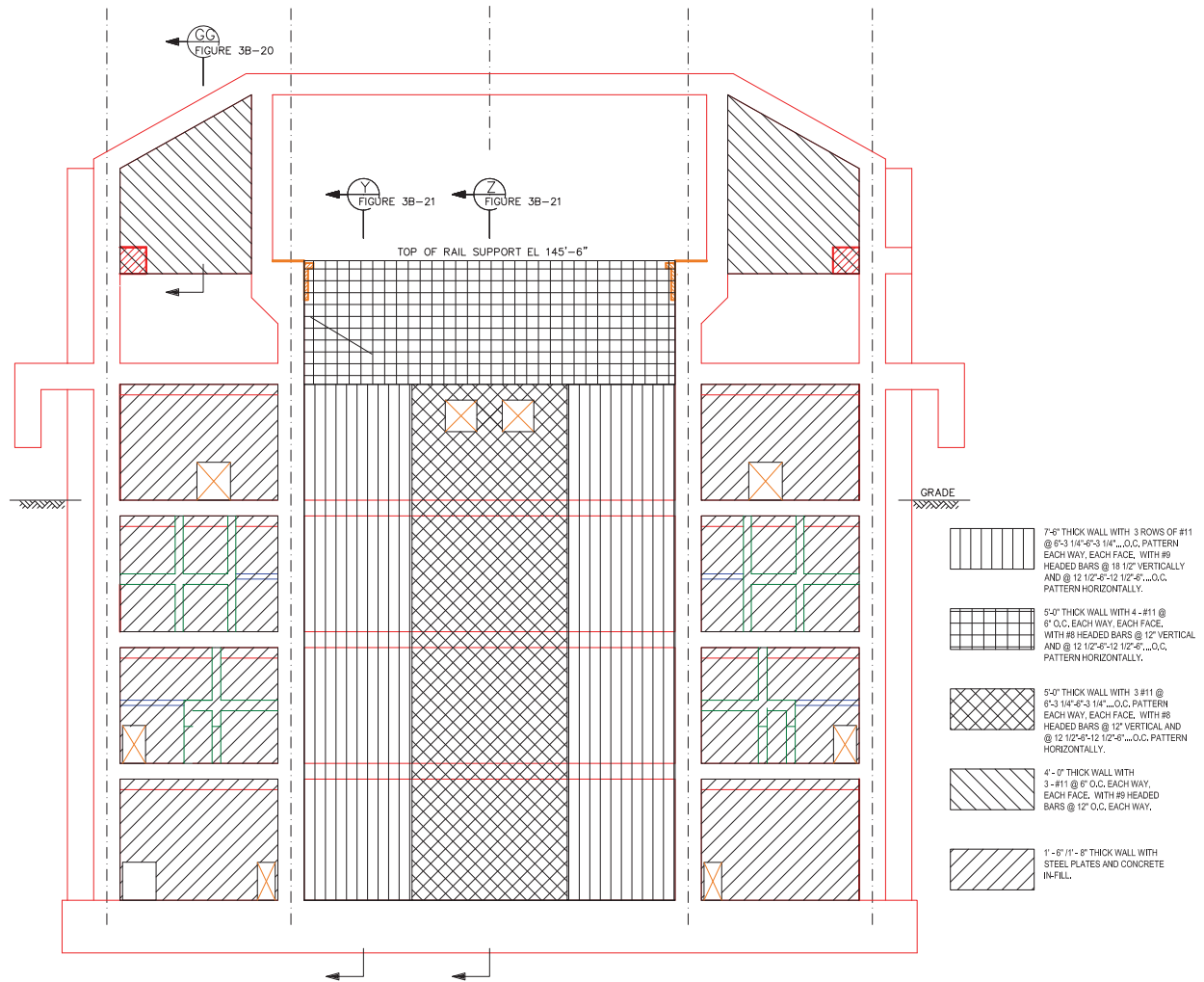
RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Figure 3B-17: RXB Reinforcement Section View of 4 ft Thick Wall on Grid Line 4

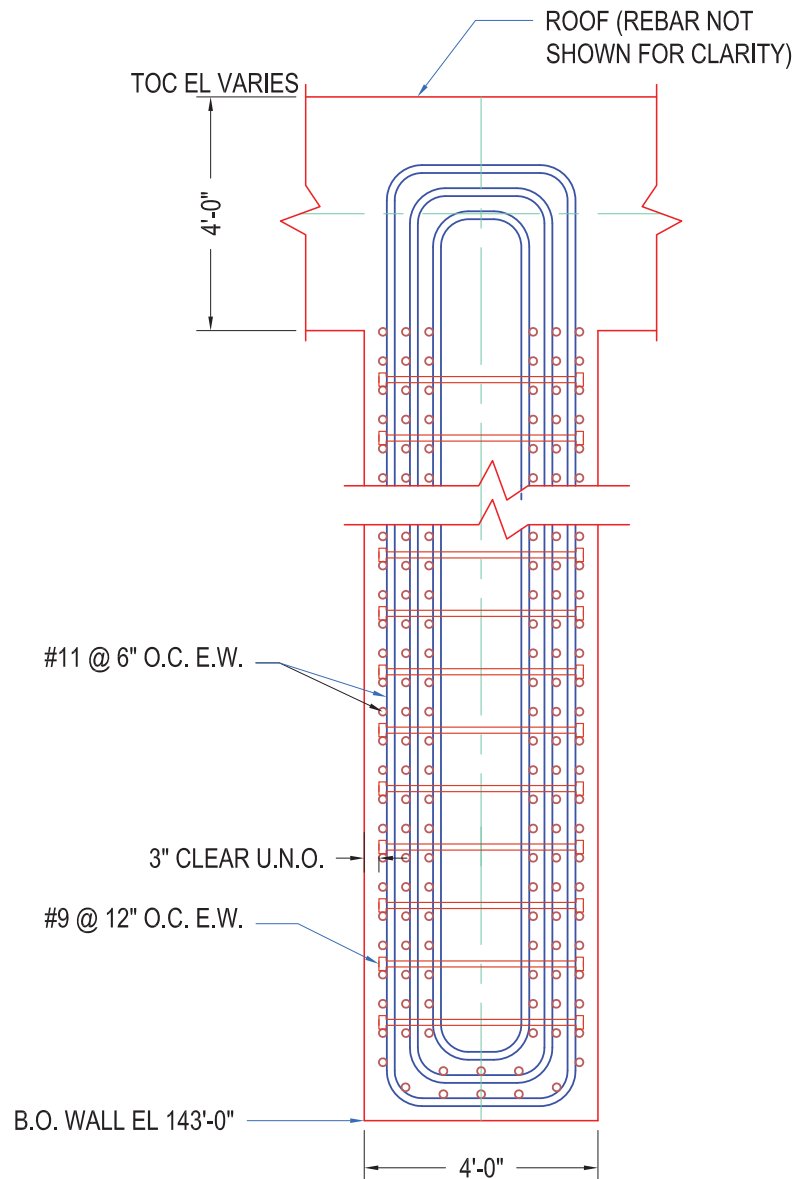
SECTION
SCALE: NTS

GG
FIGURE 3B-15

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Figure 3B-19: RXB Reinforcement Elevation at Grid Line 6 Wall

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Figure 3B-20: RXB Reinforcement Section View of Upper Stiffener Wall on Grid Line 6

SECTION

GG

SCALE: NTS FIGURE 3B-19, 3B-43

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Figure 3B-21: RXB Reinforcement Section Views of Pool Wall on Grid Line 6

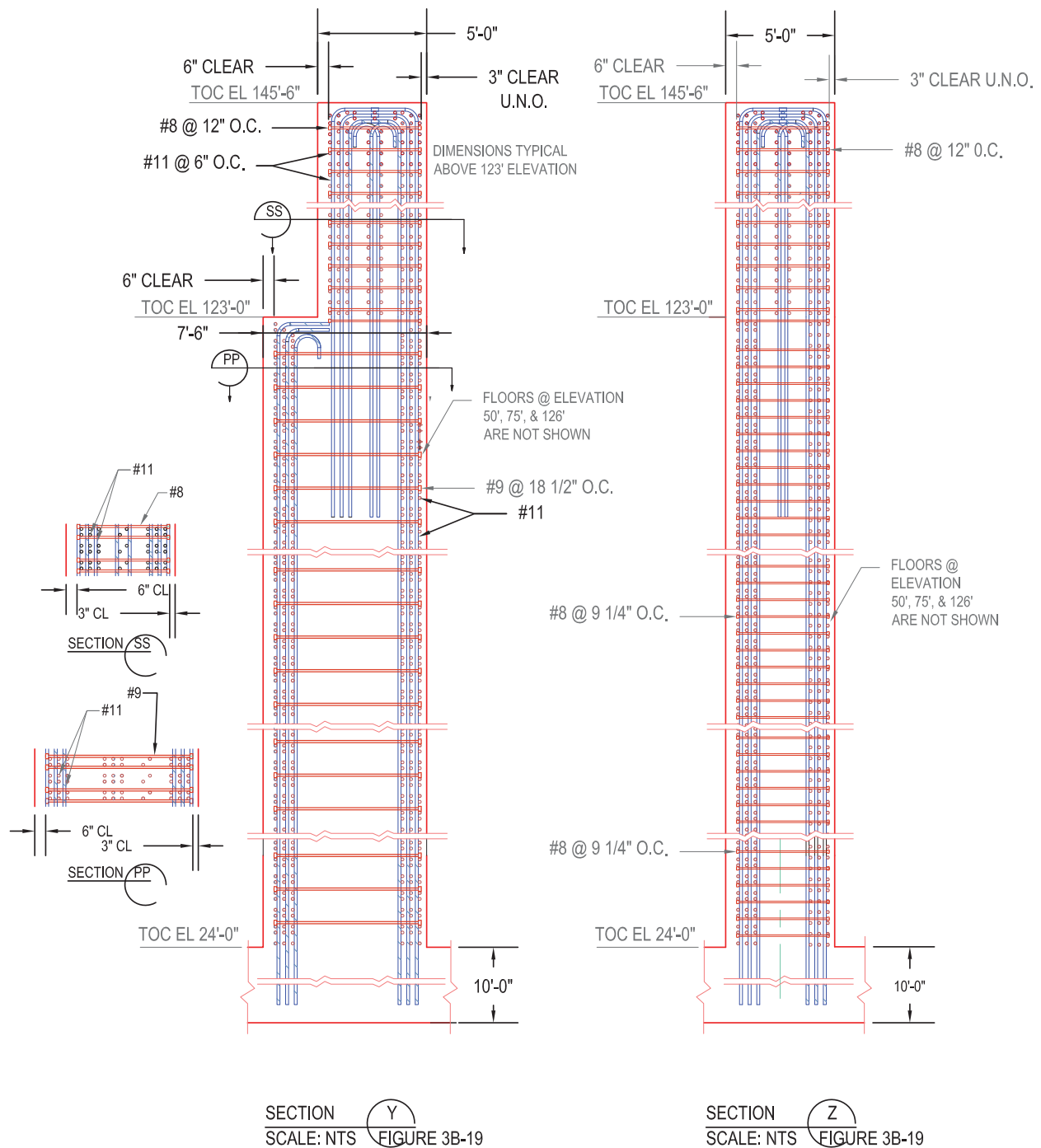
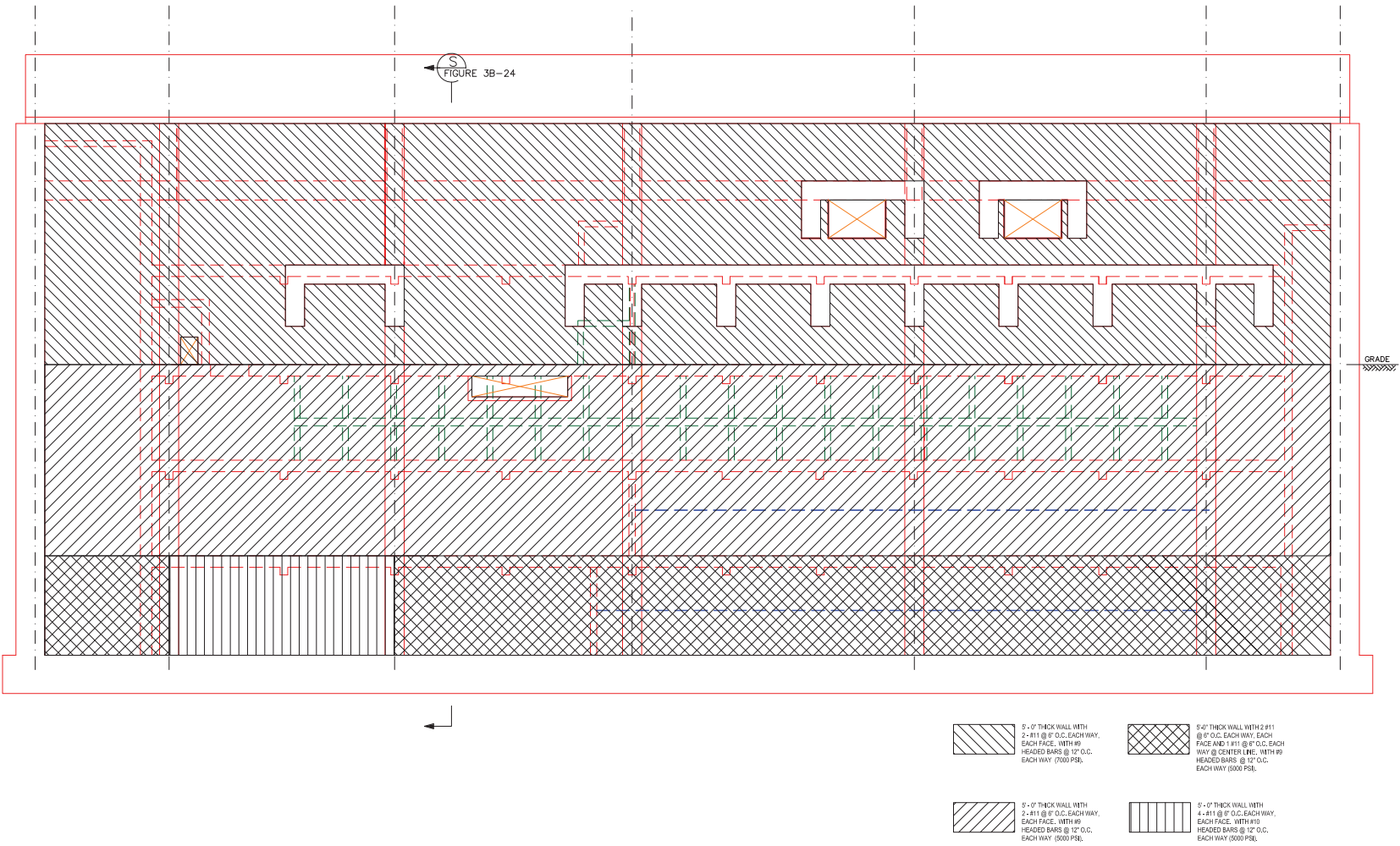
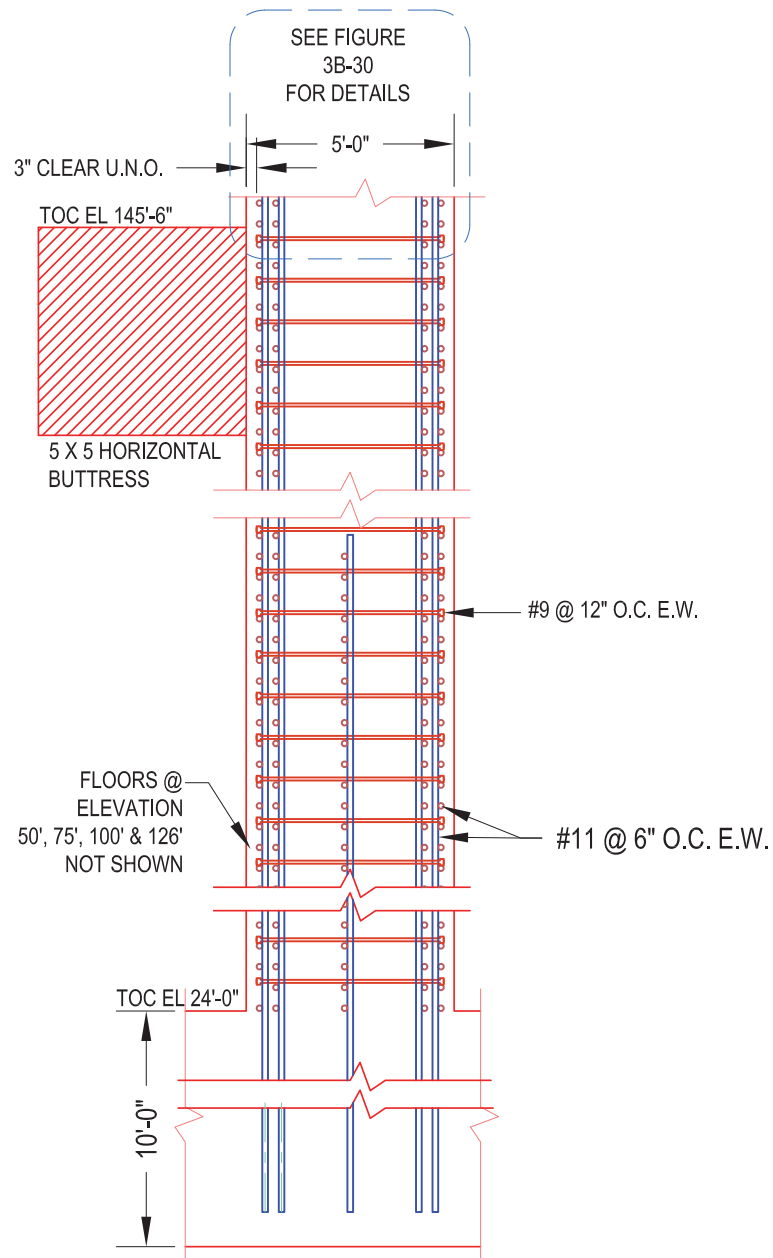


Figure 3B-23: RXB Reinforcement Elevation at Grid Line E Wall



RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Figure 3B-24: RXB Reinforcement Section View of Wall on Grid Line E

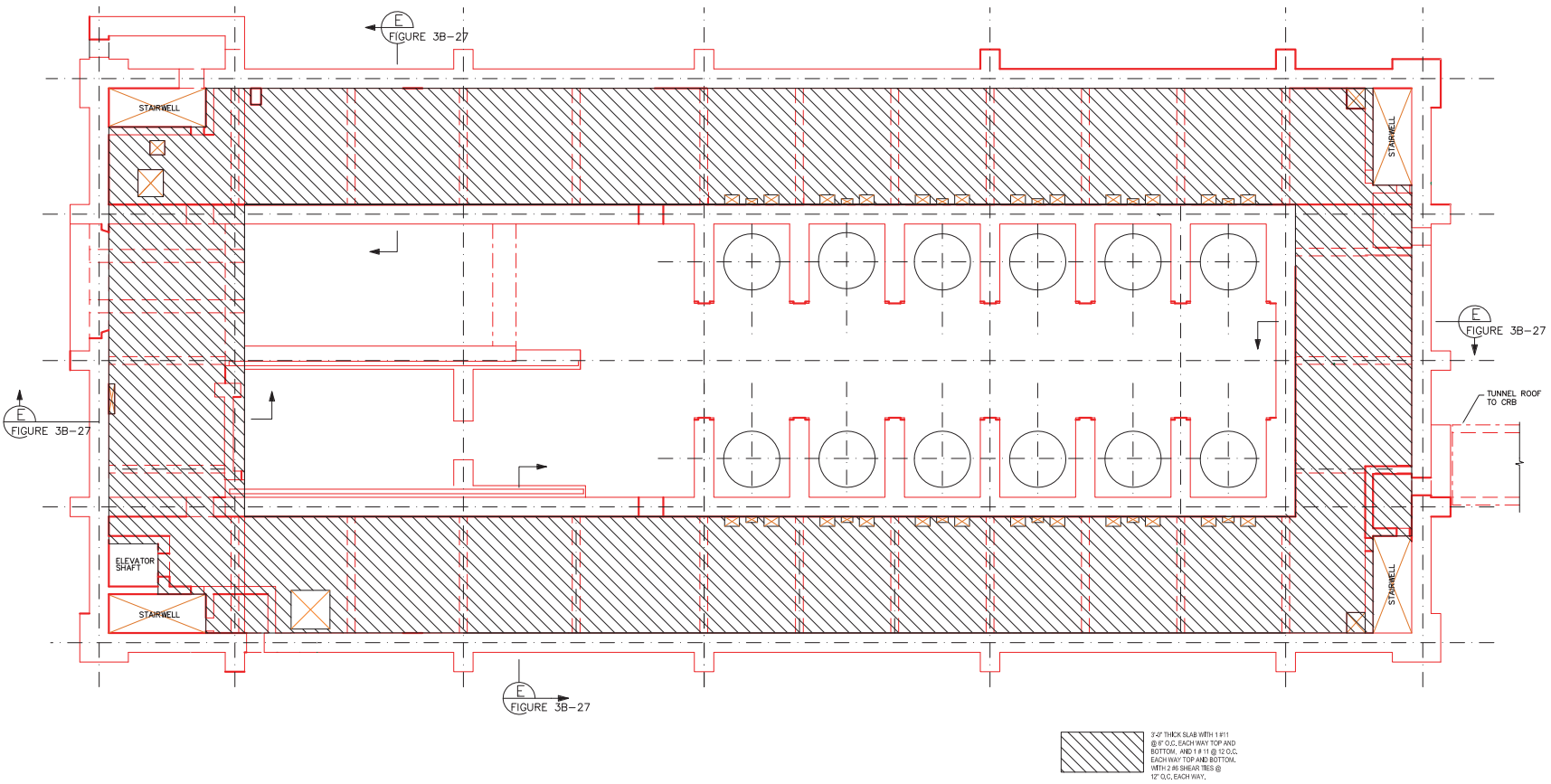
SECTION:

SCALE: NTS

S

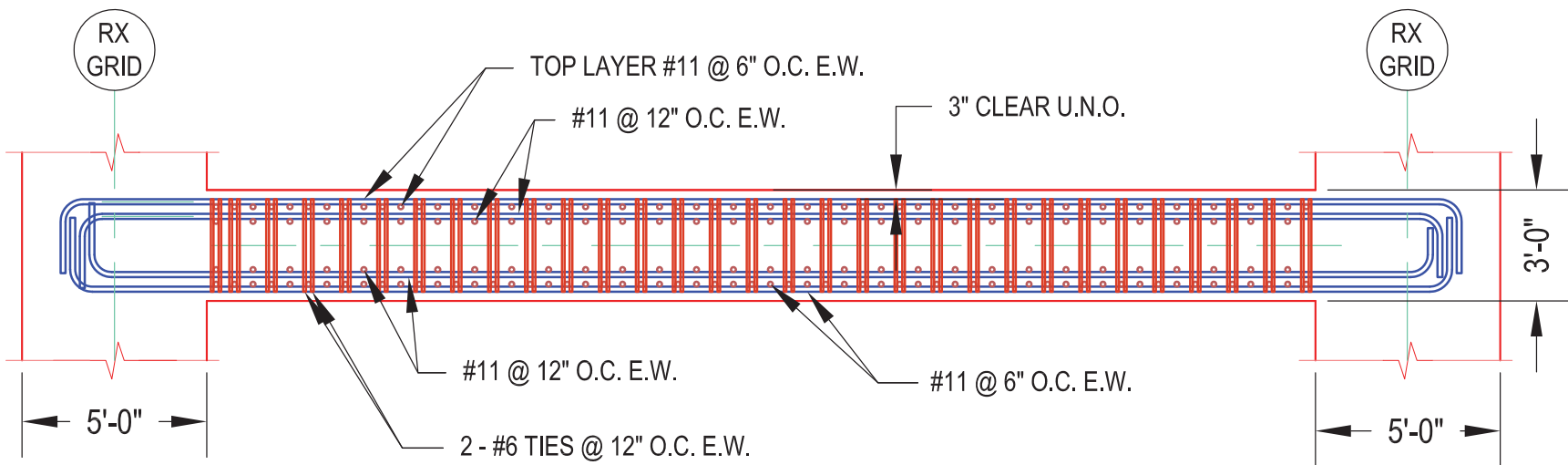
FIGURE 3B-23

Figure 3B-26: RXB Reinforcement Plan at EL 100'-0"



RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Figure 3B-27: RXB Reinforcement Section View of Slab at EL 100'-0"

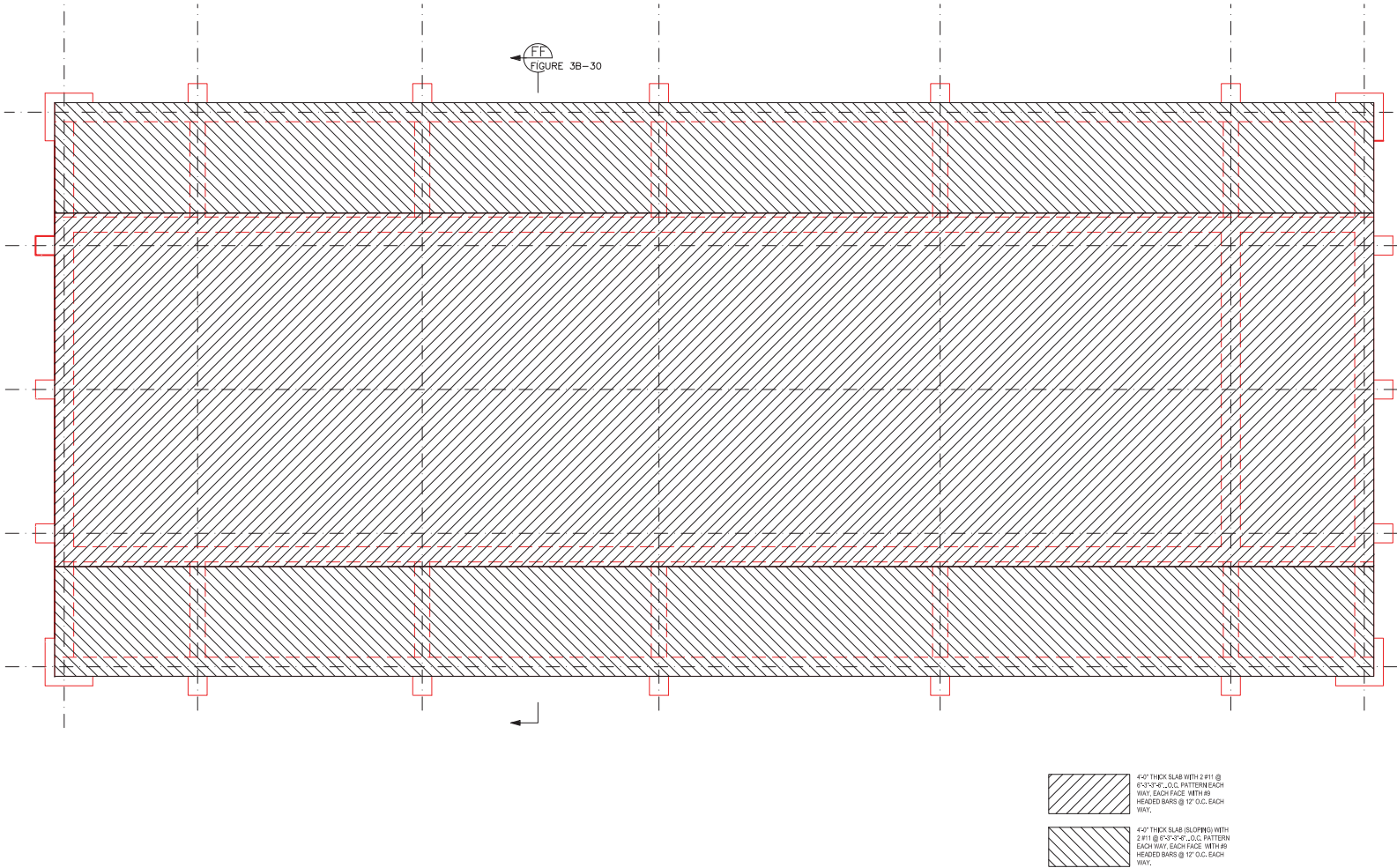


SECTION
SCALE: NTS

E
FIGURE 3B-26

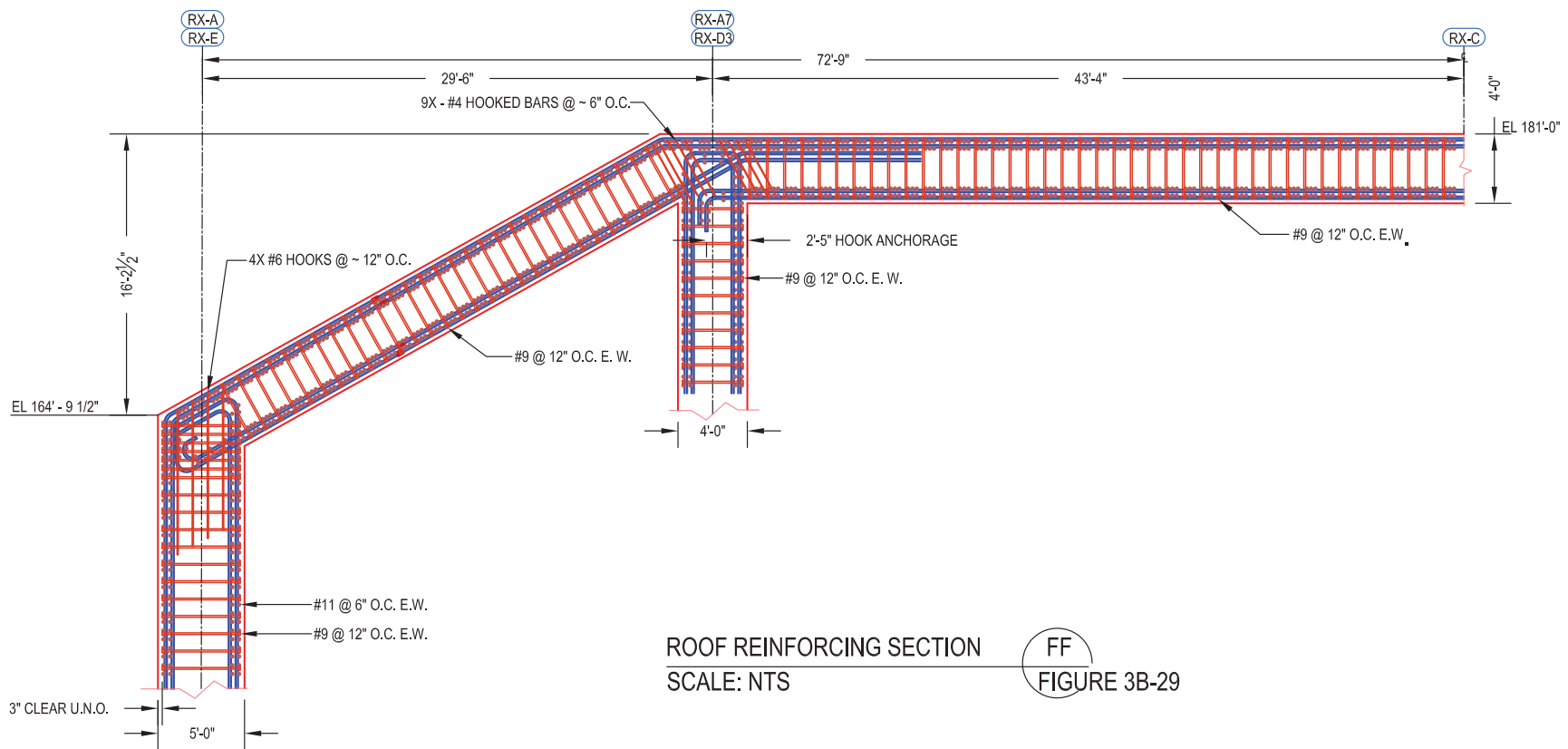
RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Figure 3B-29: RXB Reinforcement Plan for Roof Slab



RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Figure 3B-30: RXB Reinforcement Section View of Roof Slab

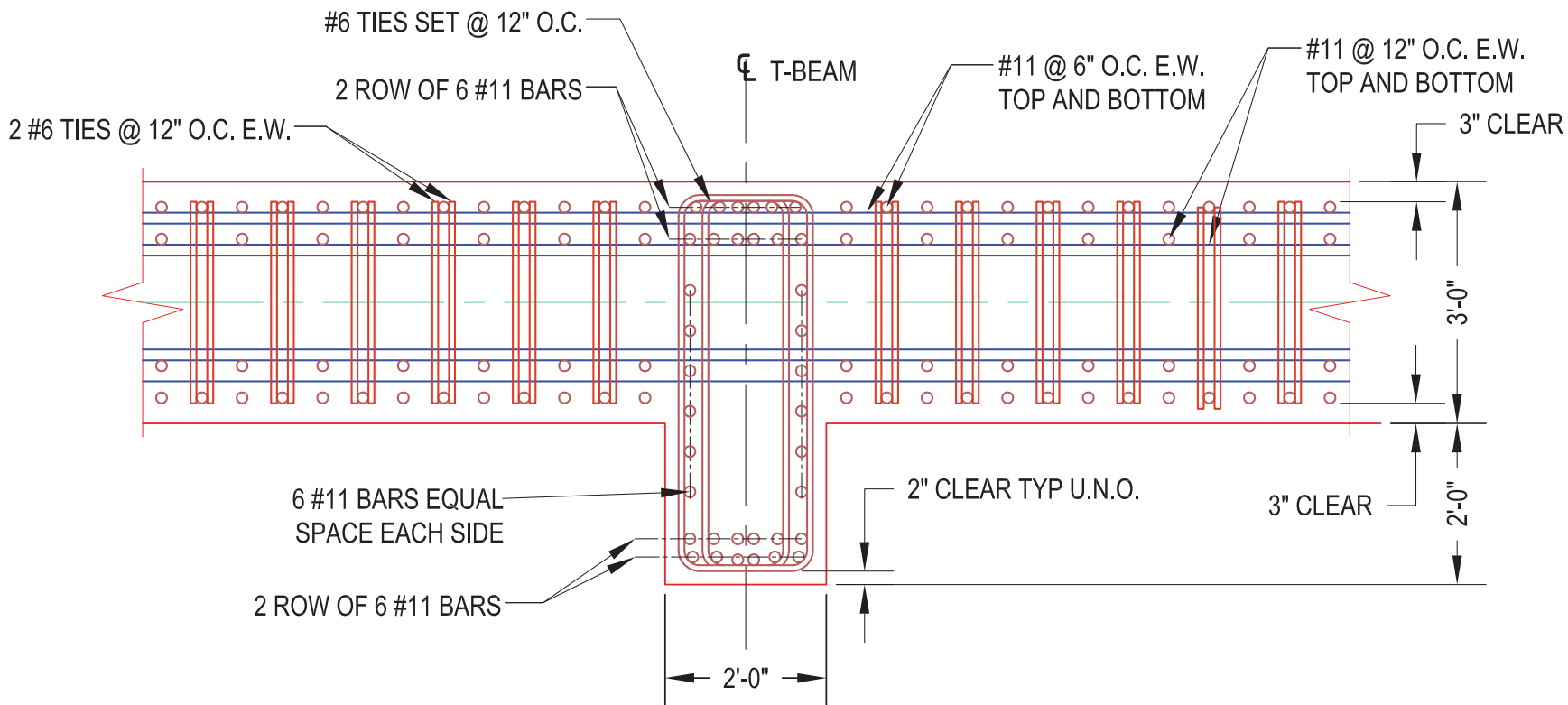


ROOF REINFORCING SECTION
SCALE: NTS

FF
FIGURE 3B-29

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

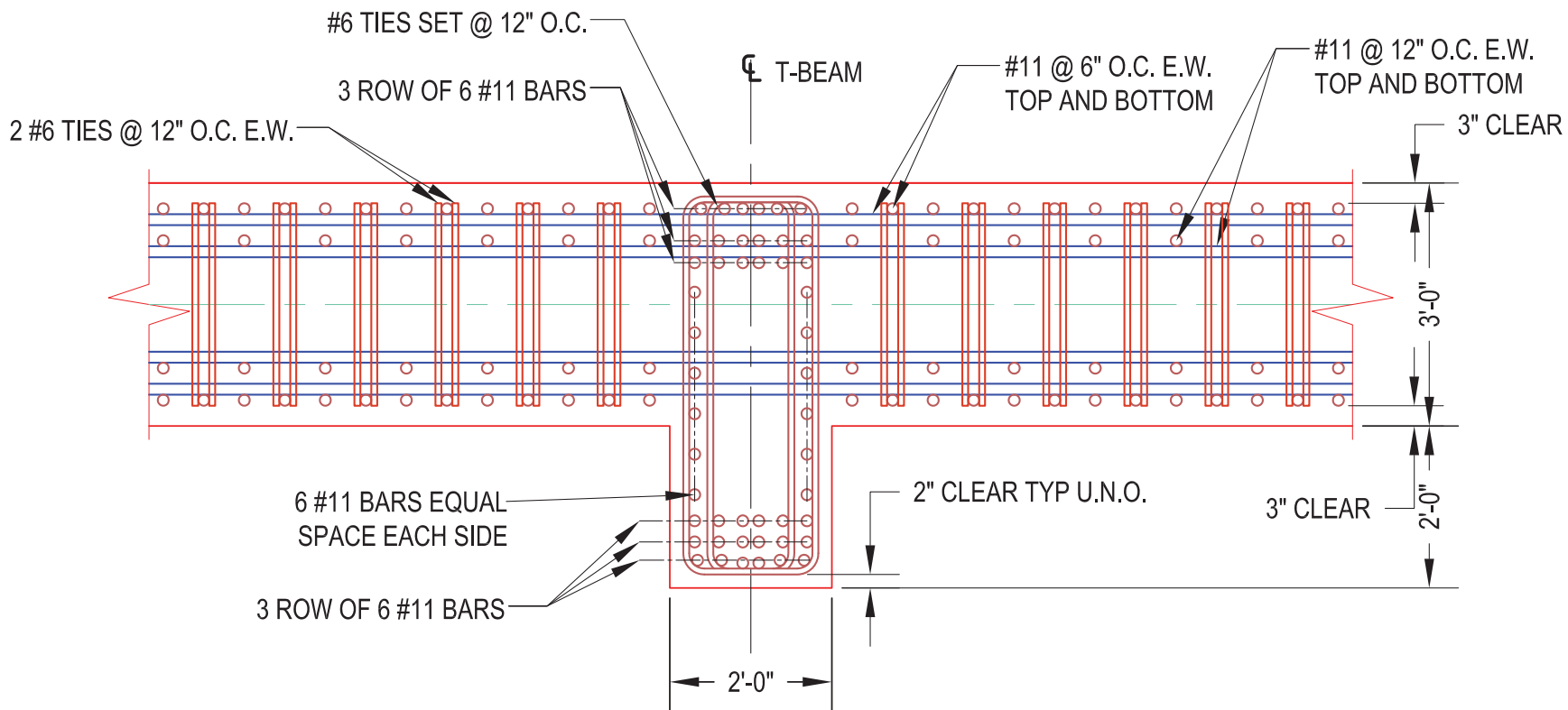
Figure 3B-38: RXB Reinforcement Detail for Type 1 T-Beams at EL 75'-0"



TYPICAL DETAILS OF REINFORCING STEEL IN THE T-BEAM AND SLAB

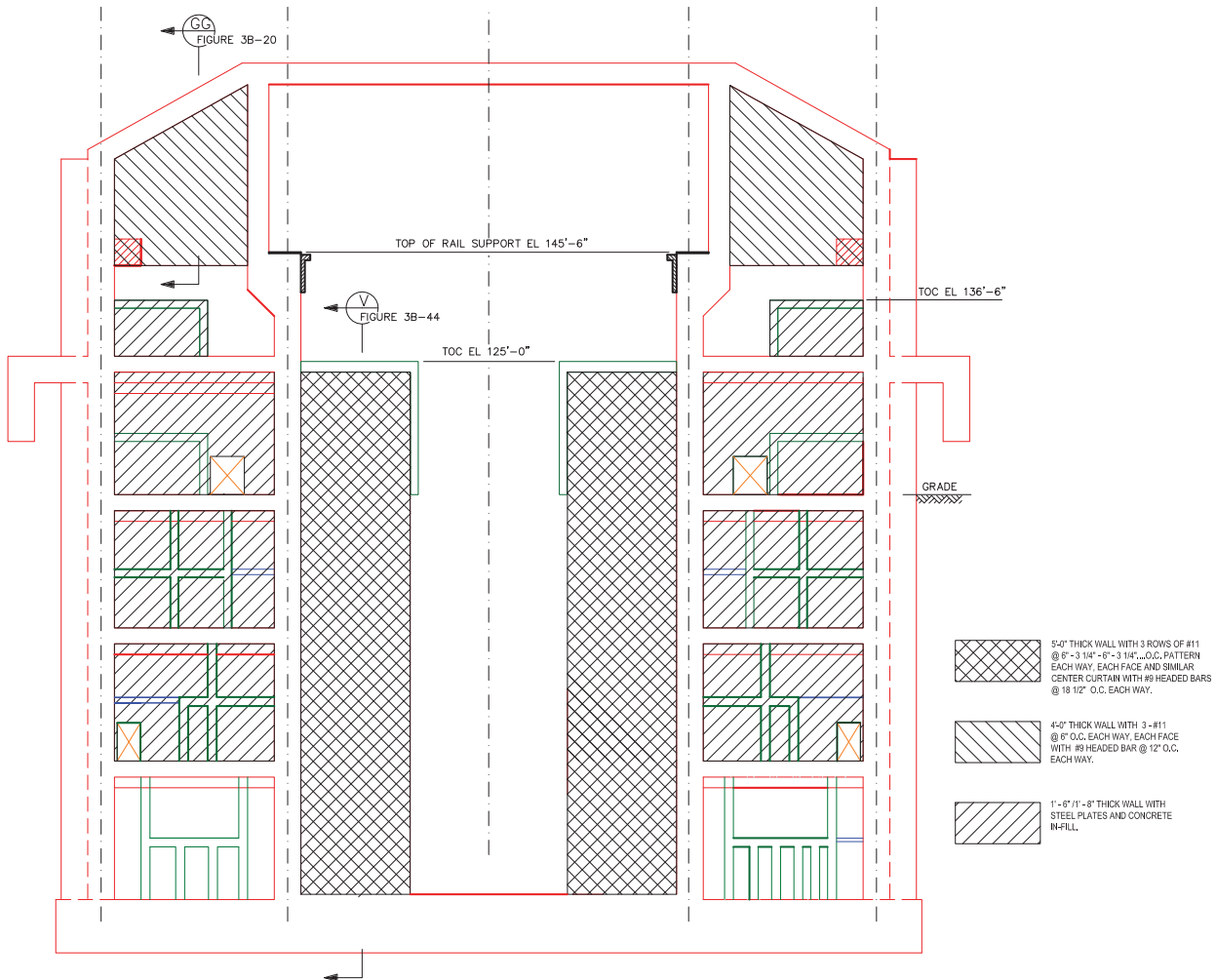
RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Figure 3B-39: RXB Reinforcement Detail for Type 2 T-Beams at EL 75'-0"



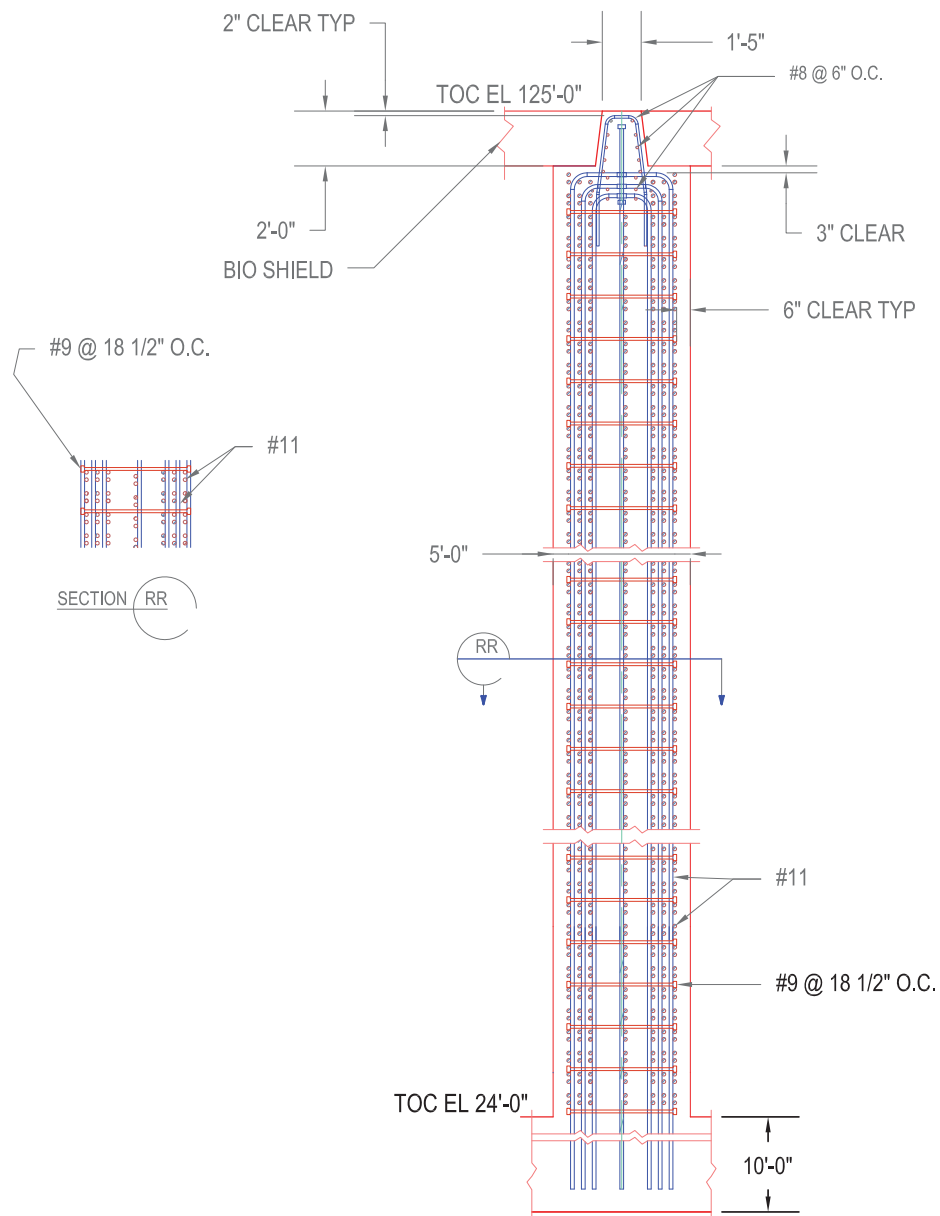
TYPICAL DETAILS OF REINFORCING STEEL IN THE T-BEAM AND SLAB

Figure 3B-43: RXB Reinforcement Elevation at RXB Grid Line 4 Wall



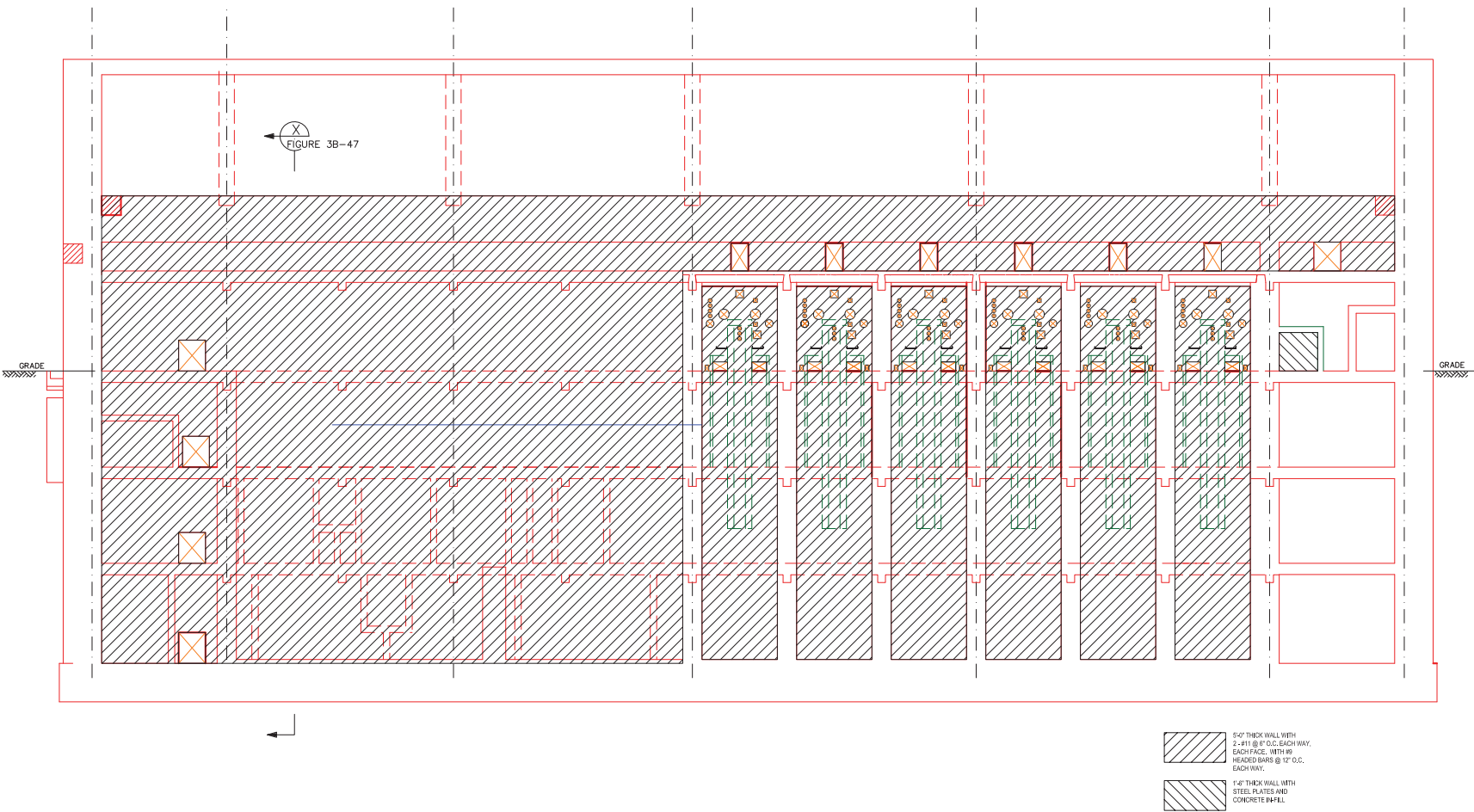
RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Figure 3B-44: RXB Reinforcement Section View of 5 Foot Thick Wall on RXB Grid Line 4

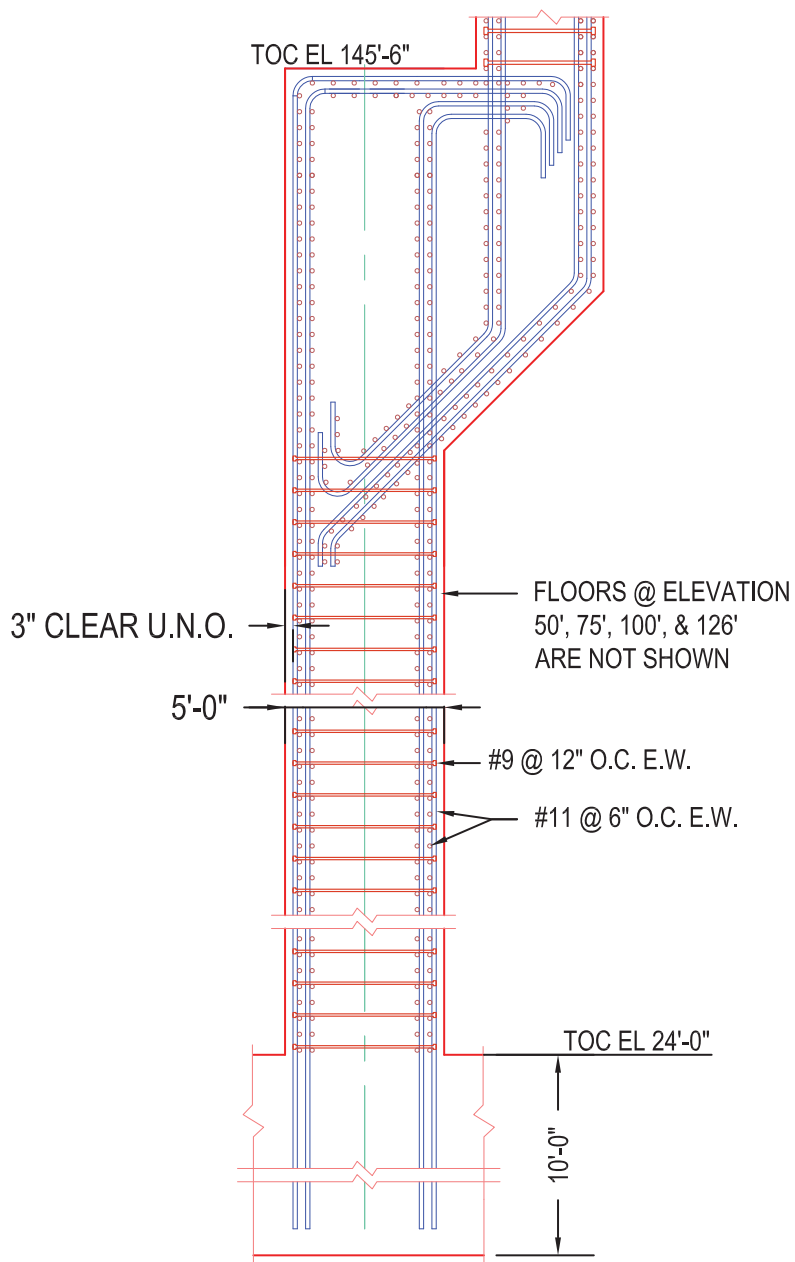
SECTION V
SCALE: NTS
FIGURE 3B-43

Figure 3B-46: RXB Reinforcement Elevation at RXB Wall at Grid Line B



RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

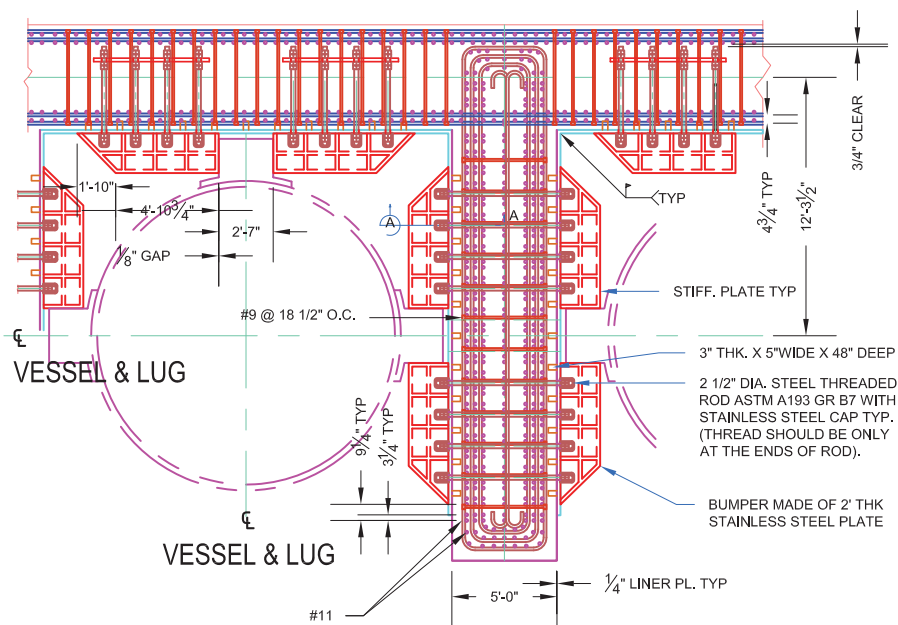
RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Figure 3B-47: RXB Reinforcement Section View of RXB Wall at Grid Line B

SECTION
SCALE: NTS

X
FIGURE 3B-46

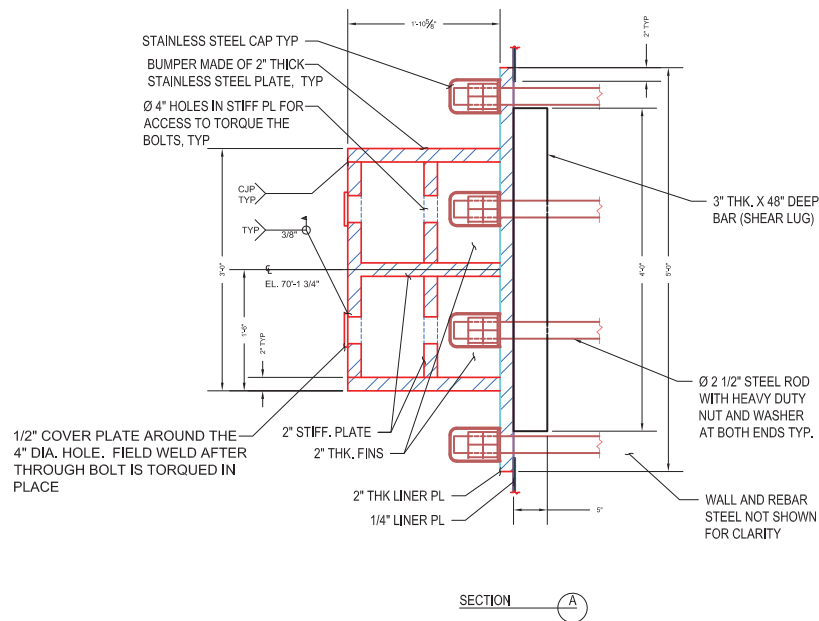
Figure 3B-51: NPM Lug Support Plan View and Details



PLAN VIEW

NOTES:

1. THE FINAL LOCATION OF THE STEEL THREADED RODS WILL BE IN BETWEEN THE #11 REBAR SPACING. THE FINAL POSITION OF THE SHEAR LUGS WILL BE ADJUSTED ACCORDINGLY.
2. CONSTRUCTION: NOTE THE RXM LUG SUPPORTS NEED TO BE SHOP ASSEMBLED REBAR/LINER/RXM. LUG SUPPORTS WILL NEED TO BE MODELED TO BE CONSTRUCTIBLE.
3. THE SHEAR TIES WILL EXTEND THOROUGH THE 66" X 66" ANCHOR PLATE AND THE FINAL LOCATIN WILL BE BETWEEN THE #11 REBAR SPACING.



SECTION A-A

RAI 03.08.04-15, RAI 03.08.04-16, RAI 03.08.04-17

Figure 3B-52: NPM Lug Location

